Research Report 1282

UTILIZATION OF TACTICAL COMPUTERS FOR TRAINING: JOB/TASK AND TRAINING ANALYSIS - AMMUNITION AND FIRE UNIT (AFU) MODULE

A. K. Butler, W. G. Hoyt and P. W. Leung System Development Corporation

MANPOWER AND EDUCATIONAL SYSTEMS TECHNICAL AREA





U. S. Army

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March 1976

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A. K. Butler, W. G. Hoyt and P. W. Leung System Development Corporation

Submitted by:

James D. Baker, Chief

MANPOWER AND EDUCATIONAL SYSTEMS TECHNICAL AREA

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This is the fourth in a series of six reports by the System Development Corporation (SDC) which describes the utilization of tactical computers for training. The previous reports are entitled: Analysis of System and Training Requirements (RN 80-29), Job/Task and Training Analysis (RR 1281) and Field Evaluation Plan (RN 80-30). The two other reports under contract DAHC19-75-C-0031 are: Analysis of System and Training Requirements (Summary report) (RR 1283) and Development of CAI Performance Measures: TACFIRE Tactical Data System (RR 1284).

This Research Report (RR 1282) while concentrating on the Ammunition and Fire Unit (AFU) Module, should be considered a supplement to Research Report 1281 cited above. This report, written by A. K. Butler, W. G. Hoyt and P. W. Leung of SDC, presents the training analysis results for the complete AFU module while incorporating and integrating RR 1281.

JOSEPH ZEIDNER
Technical Director

EXECUTIVE SUMMARY

The purpose of this project was to examine the feasibility of using computer-assisted instruction (CAI) as an embedded, stand-alone, individualized training program for instructing operational users of the TACFIRE Tactical Data System.

TACFIRE courseware, based upon an analysis of system and training requirements and a Job/Task and Training Analysis, has been developed and produced in five functional areas: Tactical and Technical Fire Control (Fire Mission Module); Artillery Target Intelligence (ATI Module); Ammunition and Fire Unit (AFU Module); Support (SPRT Module); and System (SYS Module). Courseware consists of independent modular blocks of instruction containing 44 PLANIT Lessons (23 Student Lessons) and 10 performance based module pre- and posttests totaling approximately 3,600 PLANIT frames. Average course time for this individualized, self-paced embedded training program is estimated at 40 hours. Preliminary estimates indicate 25% to 35% of battalion fire direction center (FDC) operations are covered. Based on this estimate, for twice the cost of the current effort the remainder can be done. Courseware applies also to DivArty FDC operations, as well as a spin-off to fire support officer (FSO) and fire support element (FSE) operations.

The Courseware is well documented. The specific tasks, criterion and enabling objectives, and test items are well defined, having been developed in accordance with the TRADOC Systems Approach to Training (SAT), Systems Engineering of Training, TRADOC Reg 350-100-1, and with the "functional context plus" approach. This approach considers the job (tasks), what the student brings into the learning situation and how to arrange lesson modules to be maximally supportive of the student during the learning process. course starts in a context familiar to the student, providing a bridge between his previous experience (manual field artillery) and TACFIRE. This makes it easier for the student to learn, relate, and integrate TACFIRE operations. This approach further provides an organization (course and lesson design) where earlier lessons, such as fire missions (TTFC-FM function), provide the basis and requirement for other operations, such as fire unit and observer location (AFU function). The "why," "effect," and "use" of various operations is made explicit as a natural part of course development. This also makes it easy for the student to learn, relate and integrate TACFIRE operations. It also provides for repeated reinforcement of TACFIRE operations during the course.

The TACFIRE course executes properly on the TACFIRE system, has been reviewed for content and tactical employment by personnel of the U.S. Army Field Artillery School (USAFAS), and is operationally ready for implementation. The courseware is expected to produce individuals who can perform in an operational setting, under light load conditions, the tasks/job covered in the course. An extensive on-the-job training (OJT) period of 5 or 6 months should not be required. Further training such as a carefully planned series of exercises (light load, medium load, heavy load), each stressing various objectives, should result in an operational ready individual within a short time frame.

This program can be used on any TACFIRE system for training, either in a school or field environment.

The courseware is updated quickly and easily as changes in tactical doctrine or equipment occur. This was fully demonstrated during the content review by USAFAS personnel when changes were made on-line as each module was reviewed. Cost of courseware for each additional TACFIRE system is minimal, i.e., the cost of duplicating courseware computer tape and printing additional copies of the offline course exhibits.

Automated instruction (AI) can be developed for all the functional areas. There are no methodological restrictions. The determining factor for those selected for this project was that they were more critical for fire direction.

Recommendations include:

- 1. Complete the courseware development to provide a permanent embedded training program, easily modified to meet changes in tactical doctrine and equipment, and easily duplicated to as many TACFIRE systems as required.
- 2. Use courseware to provide orientation and initial exposure to ${\tt TACFIRE.}$
 - 3. Use TACFIRE AI Module tests to determine need for refresher training.
- 4. Use the methodology and restructure the TACFIRE AI course for command and staff personnel who are not "direct" users of the system.
- 5. Use the proven methodology and inherent classification of the system components to develop a classified AI training program applicable to nuclear weapons.
 - 6. Develop a simplified reference manual for ACC operators.
 - 7. Develop a computerized production system for generating exercises.
 - 8. Develop embedded training programs for other tactical data systems.
- 9. Develop or use TACFIRE modules to train reserve units affiliated with active $\mbox{Army units}$.

Documentation produced in this project, including this final report, are as follows:

Utilization of Tactical Computers for Training: Analysis of System and Training Requirements, 20 June 1975. (Research Note 80-29).

Utilization of Tactical Computers for Training: Job/Task and Training analysis, 20 August 1975. (Research Report 1281).

Utilization of Tactical Computers for Training: Field Evaluation Plan, 5 December 1975. (Research Note 80-30).

Utilization of Tactical Computers for Training: Job/Task and Training Analysis - Ammunition and Fire Unit (AFU) Module, 1 March 1976. (Research Report 1282).

Utilization of Tactical Computers for Training: Summary Report. (Research Report 1283).

TACFIRE AI courseware and module tests in the form of card decks, course listings and off-line course exhibits.

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I. INTRODUCTION

This Research Report, RR 1282, <u>Utilization of Tactical Computers for Training</u>:

<u>Job/Task Training Analysis - Ammunition and Fire Unit (AFU) Module</u>, presents the training analysis results for the TACFIRE AFU functional area.

This Research Report should be considered an addendum and supplement to the Phase II report, RR 1281, Utilization of Tactical Computers for Training: Job/Task Training Analysis, dated 20 August 1975. Figure 1 depicts the five phases that constitute the total project effort. The Phase II training analysis results reported in RR 1281 provided for selective coverage of portions of the Technical and Tactical Fire Control (FM); Artillery Target Intelligence (ATI); Ammunition and Fire Unit (AFU); Support (SPRT); and System (SYS) functional areas. Complete coverage of all message formats in one functional area is now desired for the purposes given below. The functional area selected is the Ammunition and Fire Unit (AFU) area. This Research Report presents the training analysis results for the complete AFU module, extending, incorporating, and integrating the previous analysis reported in RR 1281

A. BACKGROUND

The U.S. Army Research Institute (ARI) is engaged in an effort to develop and evaluate self-instructive programs for users of tactical data processing systems. As part of this research effort, the System Development Corporation is currently developing computer assisted instruction (CAI) that will train TACFIRE operators. The basic approach is to embed training CAI materials within the operating TACFIRE system and then to use the system to train the user in its use. Upon completion of the development of the CAI, ARI will undertake an evaluation of the training and cost effectiveness of this approach.

Phase I - Analyze System and Training Requirements

►Phase II - Perform Job/Task and Training Analysis

Phase III - Develop Courseware

Phase IV - Install Courseware

Phase V - Develop Field Evaluation Plan

Figure 1. Utilization of Tactical Computers for Training: Major Project Phases

B. PURPOSE

The purpose of this added effort is to extend the scope of the CAI under development so as to permit more valid comparisons with traditional methods of instruction. Specifically, the computerized courseware for the AFU functional area of TACFIRE will be expanded to more closely approximate the material covered by the current traditional (platform) means.

This expanded effort will be integrated within the current project activities which are shown in Figure 1. This Research Report presents the results of the detailed job/task analysis for the AFU functional area. This system engineering of training process includes: (1) the development of Task/Subtask Flow Charts; (2) the development of Training Analysis Information Sheets (TAIS); (3) the development of Criterion and Enabling Objective Worksheets, and (4) the development of performance based criterion test items. In addition, content development outlines have been prepared.

The job/task analysis is based upon our analysis of TACFIRE documentation, an analysis of the system engineering of training documentation prepared by the U.S. Army Field Artillery School (USAFAS), Ft. Sill, Oklahoma, discussions with TACFIRE personnel at USAFAS, and demonstration of and hands on experience operating the TACFIRE equipment at USAFAS and the MELPAR facility Computer System Command, Arlington, Virginia.

C. ORGANIZATION

The results of the job/task analysis are linked together by an audit trail utilizing the TAIS number on each of the Phase II products. The relationship between various sections of this report are shown by the TAIS number, e.g., 3001, and the breakdown of the task elements, e.g., 3001.1, 3001.2. This numbering system is carried over to the Criterion and Enabling Objectives and the Test Item Worksheets.

Section I of this Research Report identifies the position of Phase II in the major project phases; the background and purpose of this added effort and the organization of TR 77-B2.

Section II provides the content development outlines. These data include a summary of the subject content and the general task/objectives for the AFU functional area.

Section III provides the Task/Subtask Flow Charts which show the relationship between each selected task and the various levels of task sub-elements involved in the performance of the task.

Section IV provides the Training Analysis Information Sheets (TAIS), Criterion and Enabling Objectives and Test Items for the AFU functional area. The documentation used in preparation of this report is listed under References in Appendix A.

These added Phase II products, after review by the U.S. Army Field Artillery School, will form the basis for the added courseware to be developed in Phase III of this project.

II. CONTENT DEVELOPMENT OUTLINES

This section contains the expanded content development outlines for the TACFIRE Ammunition and Fire Unit Function. Subject content for this TACFIRE functional area is indicated on the left with a corresponding general tasks/objective statement for each major sub area presented on the right. The audit trail for each general task/objective is maintained by the TAIS number (e.g., 3001) throughout the Task/Subtask Flow Charts (Section III) and Training Analysis documentation; TAIS, Criterion and Enabling Objectives, and Test Items (Section IV), for this TACFIRE functional area.

Ammunition and Fire Unit Function

General Task/Objective (TAIS)

1. Purpose and Use

- 3001 State the purpose and use of AFU messages.
- a. Maintain ammunition and status data for each fire unit.
- b. Support fire planning.
- 2. Types of Data Files

3002 Identify the two basic AFU data files and state their function.

- a. Fire Unit File.
- b. Fire Unit Planning File.
- 3. Update FU File

- 3003 Update current FU file and verify entries.
- Select and display AFU; UPDATE message.
 - Depress format matrix switches.
 - 2) Activate FORMAT COMMAND switch.
- b. Identify entries for FU data.
 - 1) FU
 - 2) WPN
 - 3) MSN
 - 4) ZONE

 - 5) CORD 6) APPL
 - 7) MODEL
 - 8) WSTR
 - 9) AZ
 - 10) DF
 - 11) READY
- c. Take computer action and identify results.

- d. Print and Verify entries.
 - Select and display AFU; COMD message.
 - 2) Specify FU and PRINT.
 - 3) Take computer action and identify results.
 - Interpret AFU 2203 FU REPORT output message printed on the ELP.
- 4. Add Ammunition Received to FU File
 - Select and display AFU; BAMOUP message.
 - Depress format matrix switches.
 - Activate FORMAT COMMAND switch.
 - b. Identify entries for ammunition data.
 - 1) FU
 - 2) AMOR
 - 3) PROJA and PROJB
 - 4) PLOT
 - Take computer action and identify results.
 - d. Print and verify entries.
 - Select and display AFU;
 COMD message.
 - 2) Specify PRINT and SUMS.
 - 3) Take computer action and identify results.
 - 4) Interpret AFU 2204 FU AMMO SUMMARY output message printed on the ELP.

3004 Update the ammunition inventory for an active FU to reflect ammunition received and verify data entries.

- 5. Enter Current Muzzle Velocities
 - a. Select AFU; DIR format message.
 - Depress format matrix switches.
 - Activate FORMAT COMMAND switch.
 - 3) Move cursor to first letter M
 - 4) Activate FORMAT SELECT switch.
 - Identify entries for muzzle velocity data.
 - 1) FU name
 - 2) MV1--MV5
 - c. Take computer action and identify results.
 - d. Print AFU 2203 FU REPORT output message.
 - Select and display AFU;
 COMD message.
 - 2) Specify FU name and PRINT.
 - Take computer action and identify results.
 - e. Interpret AFU 2203 FU REPORT output message.
- 6. Enter Mask data for Fire Unit
 - a. Select and display AFU; MASK message.
 - Depress format matrix switches.
 - Activate FORMAT COMMAND switch.

3005 Enter current muzzle velocities for a FU and verify data entries.

3006 Update Mask data for the fire unit and file planning files, and verify data entries.

- Identify entries to enter a minimum quadrant elevation
 - 1) FU
 - 2) PLAN
 - 3) MASKA-MASKD
- c. Take computer action and identify results.
- d. Verify data entries.
 - Select and display AFU; COMD message.
 - 2) Specify FU and EDIT.
 - 3) Display AFU; MASK on RD.
 - 4) Review AFU; MASK message on RD.
 - 5) Take DELETE action to remove AFU; MASK message from the RD.
- 7. Process registration data
 - a. Process AFU; REG message.
 - 1) Identify purpose of AFU; REG message.
 - 2) Identify when AFU; REG message is placed in the receive queue.
 - 3) Display AFU; REG message.
 - b. Identify mnemonics of AFU; REG message.
 - c. Take computer action and identify results.
 - d. Delete registration entries for a fire unit.
 - Select and display AFU; REG message format.
 - a) Depress format matrix switches.
 - b) Activate FORMAT COMMAND switch.

3007 Process an ammunition and fire unit registration data input message and delete registration data for a fire unit from the fire unit file.

- 2) Identify entries to delete registration data.
 - a) FU
 - b) DELETE
 - c) LOT
 - d) CHG
- Take computer action and identify results.
- 8. Change Critical Ammunition Level and Available Supply Rate
 - Select and display AFU; AMOL message.
 - Depress format matrix switches.
 - Activate FORMAT COMMAND switch.
 - b. Identify entries for ammunition levels.
 - 1) FU
 - 2) SHELS
 - 3) FUZES
 - c. Take computer action and identify results.
 - d. Select and display AFU; ASR message.
 - Depress format matrix switches.
 - Activate FORMAT COMMAND switch.
 - e. Identify entries for available supply rate.
 - 1) FU or WPN
 - 2) ASRLVL

3008 Modify the critical ammunition level for a specific FU, set the available supply rate for the active fire units, and verify data entries.

- f. Take computer action and identify results.
- g. Print and verify entries.
 - 1) Select and display AFU; COMD message.
 - Specify PRINT and SUMS.
 - 3) Take computer action and identify results.
 - 4) Interpret AFU 2204 FU AMMO SUMMARY output message printed on the ELP.
- 9. Process a Mission Fired Report
 - Identify when AFU; MFR message is generated.
 - b. Display AFU; MFR message.
 - c. Interpret AFU; MFR message.
 - d. Make changes to AFU;MFR message.
 - e. Take computer action and identify results.
 - f. Establish automatic transmission of AFU; MFR message to a backup Battalion.
 - Select and display AFU; COMD message.
 - Specify XTEL and TO.
 - Take computer action and identify results.
- 10. Build a New Fire Plan
 - a. Select and display AFU; BUILD message.
 - Depress Format matrix switches.
 - 2) Activate FORMAT COMMAND switch.

3009 Process a Mission Fired Report, interpret contents, transmit to Div Arty, and establish automatic transmission to a backup Battalion.

3010 Build a new fire plan from existing data in the fire unit file and verify data entries.

- b. Identify entries to create a new plan.
 - 1) Fire Unit.
 - a) NEWPLN
 - b) FU
 - Weapon Type and/or Ammunition Type.
 - a) NEWPLN
 - b) WPN
 - c) AMMO
- Take computer action and verify results.
- d. Interpret AFU 2203 FU REPORT output message printed on ELP.
- 11. Use the AFU User Command Message
 - a. Purpose of AFU; COMD message.
 - Check for missing AFU data.
 - 2) Display AFU data.
 - 3) Transmit AFU data.
 - 4) Print AFU data.
 - 5) Edit selected AFU data.
 - b. Check for missing FU information.
 - Select and display AFU; COMD message.
 - a) Depress format matrix switches.
 - b) Activate FORMAT COMMAND switch.

3011 Use the AFU user command message to: check fire unit data and interpret fire unit check report; verify data entered into the AFU files; transmit specified fire unit data to a subscriber; print and show selected fire unit data and interpret output reports.

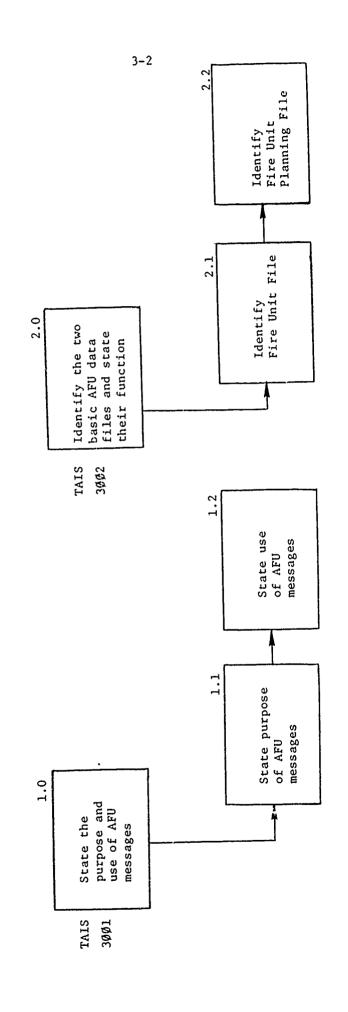
- 2) Identify entries to be checked.
 - a) CHECK.
 - b) Other mnemonics as appropriate.
- 3) Take computer action.
- c. Interpret AFU; 2205 FU CHECK REPORT output message.
- d. Edit Fire Unit File.
 - Select and display AFU; COMD message.
 - a) Depress format matrix switches.
 - b) Activate FORMAT COMMAND switch.
 - 2) Specify FU name, PLAN and EDIT.
 - 3) Display AFU; UPDATE on RD.
 - 4) Verify or edit entries.
 - 5) Take DELETE action to remove AFU; UPDATE from RD.
- e. Transmit situation report to Div Arty.
 - Select and display AFU; COMD message.
 - a) Depress format matrix switches.
 - b) Activate FORMAT COMMAND switch.
 - 2) Specify SITREP and PRINT.
 - 3) Take computer action.
 - Press TRANSFER TO EDIT switch.
 - 5) Make appropriate entries.
 - 6) Take computer action.

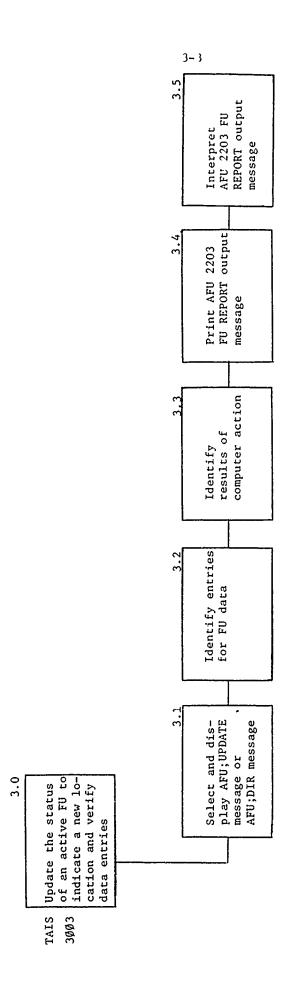
- Select and display AFU; COMD message.
 - a) Depress format matrix switches.
 - b) Activate FORMAT COMMAND switch.
- 8) Specify SITREP and PRINT.
- 9) Take computer action.
- 10) Interpret AFU 2206 SITUATION REPORT.
- f. Print, Show or Transmit AFU data.
 - Select and display AFU; COMD message.
 - a) Depress format matrix switches.
 - b) Activate FORMAT COMMAND switch.
 - Identify entries to PRINT, SHOW, or XMIT.
 - 3) Take computer action.
 - 4) Interpret output reports.
 - g. Establish or terminate automatic transmission of AFU messages to a backup Bn.
 - Select and display AFU; COMD message.
 - a) Depress format matrix switches.
 - b) Activate FORMAT COMMAND switch.
 - 2) Specify XTEL and TO.
 - 3) Take computer action.

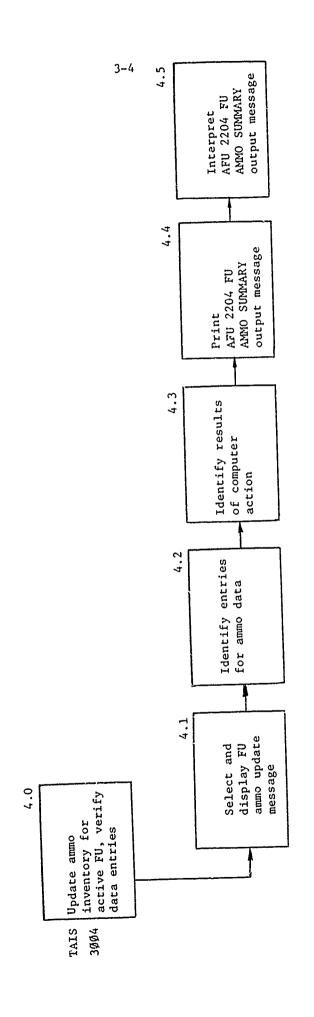
III. TASK/SUBTASK FLOW CHARTS

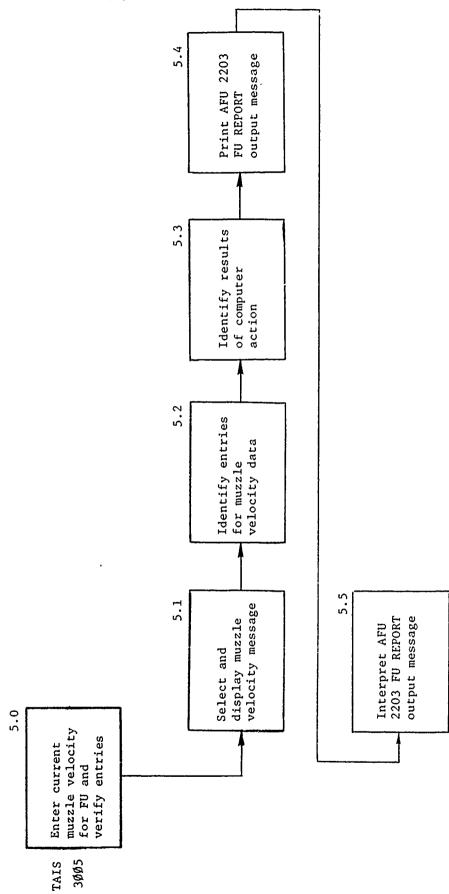
Task/Subtask Flow Charts have been prepared for each general task/objective established for the TACFIRE Ammunition and Fire Unit functional area. The Task/Subtask Flow Charts represent the training tasks, their task elements, and the relationship among them. The audit trail (e.g., 3001) for each general task/objective is maintained throughout the content development outlines (Section II), Training Analysis documentation: TAIS, Criterion and Enabling Objectives, Test Items (Section IV), and Task/Subtask Flow Charts contained within this section.

Ammunition and Fire Unit Function



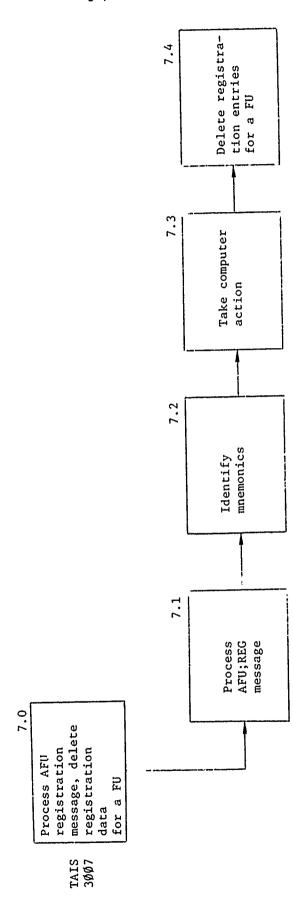






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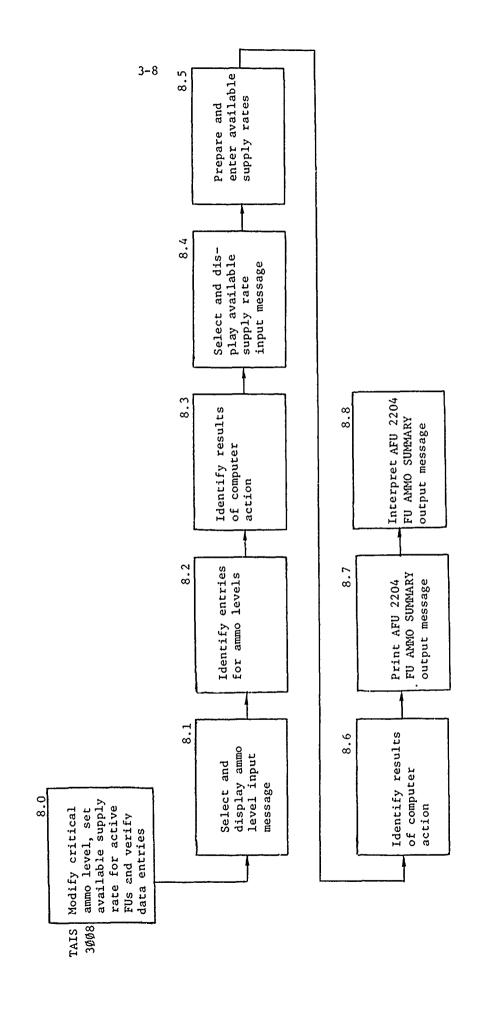
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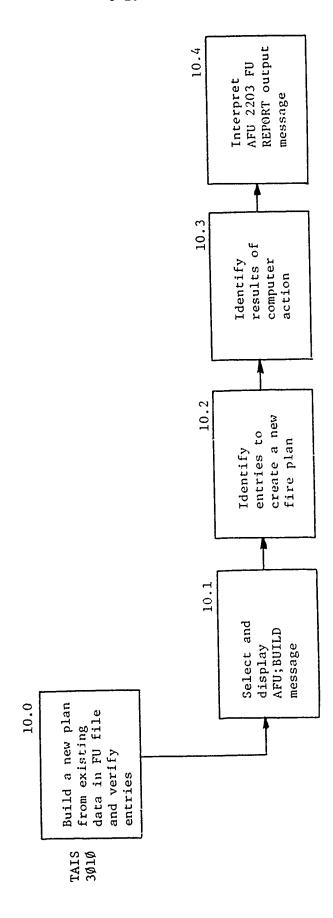
Ammunition and Fire Unit Function, Cont'd

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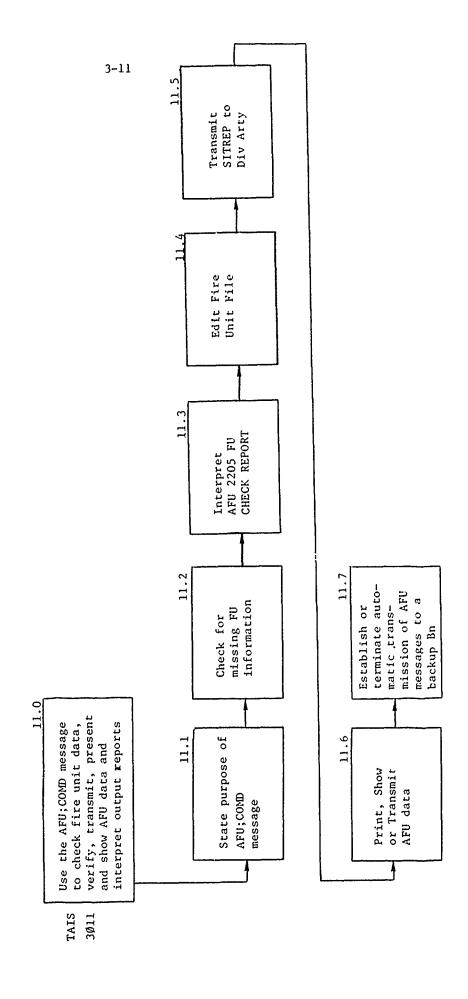
Module AFU

Ammunition and Fire Unit Function, Cont'd



Ammunition and Fire Unit Function, Cont'd

Ammunition and Fire Unit Function, Cont'd



J. A. . 😯

IV. TRAINING ANALYSIS RESULTS

This section contains the TACFIRE Training Results documentation which comprises the Training Analysis Information Sheets (TAIS), Criterion and Enabling Objectives Worksheets and Test Item Worksheets for each general task/objective specified for the AFU functional area. This audit trail (e.g., 3001) for each general task/objective is maintained throughout the content development outlines (Section II), Task/Subtask Flow Charts (Section III), and Training Analysis documentation contained within this section.

A. TACFIRE MODULE-UNIT-TAIS CORRESPONDENCE

TAIS	Unit	Page
3001	INTRO - Introduction to Ammunition and Fire Unit Function	4-2
3002	INTRO - AFU Data Files	4-5
3003	UPDATE - AFU; UPDATE - Fire Unit Update .	4-8
3004	BAMOUP - AFU; BAMOUP - Fire Unit Ammunition Update	4-18
3005	MV - AFU; MV - Muzzle Velocity	4-25
3006	MASK - AFU; MASK - Fire Unit Mask	4-33
3007	REG - AFU; REG - Registration Data	4-40
3008	AMOL/ASR - AFU; AMOL - Critical Ammunition Level	4-47
	- AFU;ASR - Available Supply	4-47
3009	MFR - AFU; MFR - Non-Nuclear Mission Fired Report	4-57
3010	BUILD - AFU; BUILD - Build A Plan	4-63
3011	COMD - AFU; COMD - User Commands	4-69

B. TOPIC DOCUMENTATION FOR AFU FUNCTIONAL AREA

Training Analysis Information Sheets, Criterion and Enabling Worksheets, and Test Item Worksheets for each TAIS identifier are organized as a group with the documentation comprising each group sequentially ordered (e.g., 3001, 3002, etc.).

TA	IS	No.	3001

MODULE	AFU
UNIT	INTRO

TRAINING ANALYSIS INFORMATION SHEET

1. TASK IDENTIFICATION: 1.0

2. TASK: State the purpose and use of AFU messages.

3. CONDITIONS: Given different formatted test items concerning the purpose and use of AFU messages, provide correct response \cdot

4. STANDARD: No errors.

5. TASK ANALYSIS:

TASK ELEMENTS	PREREQUISITE KNOWLEDGE OR SKILL REQUIREMENTS	SUPPLEMENTAL TRAINING MATERIAL	REFERENCES
1.1 State the purpose of AFU messages. 1.2 State the use of AFU messages.	1.1 None. 1.2 None.	None .	DTM 11-7440-240-10 Chapter 4 Pages 4-159 through 4-176D Chapter 6 Pages 6-1 through 6-6

MODULE	AFU
Intro	TNTDO

CRITERION AND ENABLING OBJECTIVES

TASK IDENTIFICATION: 1.0

	CRITERION OBJECTIVE(S)		ENABLING OBJECTIVE(S)
1.1	The student is able to pick from a list the major use of AFU data as being: MAINTAIN AMMUNITION AND STATUS DATA FOR EACH FIRE UNIT.	1.1.1	Pick from a list the definition of the TACFIRE mnemonic AFU as being: AMMUNITION AND FIRE UNIT.
1.2	The student is able to state SUPPORT FIRE PLANNING as being a major use of AFU data.		

1418 No. 3001

MODULF AFU
UNIT INTRO

TEST ITEMS

TASK IDENTIFICATION: 1.0

	CRITERION ITEM(S)	ENABLING ITEM(S)
. 1	AFU messages are used to maintain ammunition and status data for each:	1.1.1 The mnemonic AFU stands for the TACIRE function:
	a. Fire Support Officer	*a. Ammunition and Fire Unit
	b. Fire Direction Sergeant	b. Ammunition for Use
ł	c. Fire Unit	c. Ammunition Fired Update
	d. Fire Direction Officer	d. Artillery Fire Units
. 2	AFU data is used to support tactical fire control and fire (planning)?	

MODULE	_AFU
IINTT	INTRO

TRAINING ANALYSIS INFORMATION SHEET

1. TASK IDENTIFICATION: 2.0

2. TASK: Identify the two basic AFU data files and state their function.

3. CONDITIONS: Given different formatted test items concerning the two basic AFU data files, provide correct response.

4. STANDARD: No errors.

5. TASK ANALYSIS:

TASK ELEMENTS	PREREQUISITE KNOWLEDGE SUPPLEMENTAL OR SKILL REQUIREMENTS TRAINING MATERIAL	REFERENCES
Identify Fire Unit and Fire Planning files. State function of Fire Unit File and Fire Unit Planning File.	2.1 None. None. 2.2 Know basic AFU files.	DTM 11-7440-240-10 Chapter 4 Pages 4-159 through 4-176D Chapter 6 Pages 6-1 through 6-6

MODULE AFU
UNIT INTRO

CRITERION AND ENABLING OBJECTIVES

TASK IDENTIFICATION: 2.0

 	CRITERION OBJECTIVE(S)	ENABLING OBJECTIVE(S)
2.1	The student is able to pick from a list the two basic AFU files as being:	
,	a. Fire Unit File	
•	b. Fire Unit Planning File	
2.2	The student is able to match the two basic AFU files with their function as being:	
	Fire Unit File - Provides current status of fire unit	
*	Fire Urit Planning Fire - Provides data for fire planning	
•		
i 		

1115 No. 3002

MODULF AFU
UNIT INTRO

TEST ITEMS

TASK IDENTIFICATION: 2.0

	CRITERION ITEM(S)	ENABLING ITEM(S)
. 1	From the following list, pick the two basic files in which AFU data i stored	S
	a. Fire Unit Data File	
	*b. Fire Unit File	
	*c. Fire Unit Planning File	
	d. Fire Unit Ammunition File	
	e. Fire Unit Intelligence File	
	(b, c)	
2.2	Match each AFU basic file with its function	
	a. Provides current status of fire unit	
	 Provides historical status of fire unit 	
	 Provides data for weather prediction 	
	d. Provides data for fire planning	
	Fire Unit File (a)	
	Fire Unit Planning File (d)	
	,	
	•	

MODULE	AFU
UNIT	UPDATE

TRAINING ANALYSIS INFORMATION SHEET

- 1. TASK IDENTIFICATION: 3.0
- 2. TASK: Update current FU file and verify data entrics.
- 3. CONDITIONS: Given requirement to update current FU file, select correct message formats and fill in appropriate entries: Given sample AFU; UPDATE output message, interpret message contents. Given different formatted test items concerning the updating of the current FU file and AFU 2203 FU REPORT output message, provide correct response.
- 4. STANDARD: No errors.
- 5. TASK ANALYSIS:

TASK ELEMENTS	PREREQUISITE KNOWLEDGE OR SKILL REQUIREMENTS	SUPPLEMENTAL TRAINING MATERIAL	REFERENCES
3.1 Select and display AFU; UPDATE message. 3.2 Identify entries for fire unit data. 3.3 Identify results of computer action. 3.4 Print AFU 2203 FU REPORT output message. 3.5 Interpret AFU 2203 FU REPORT output message.	3.1 Know operation of ACC component parts. 3.2 Know operation of ACC component parts. 3.3 None. 3.4 Know operation of ACC component parts. 3.5 Able to decode mnemonics.	1. Picture/drawing of ACC. 2. Picture of the AFU directory message. 3. Picture of an AFU; UPDATE message. 4. Entry data and AFU; UPDATE format. 5. Picture of AFU 2203 FU REPORT output message. 6. Additional material to be developed as required.	DTM 11-7440- 240-10 Chapter 4 Pages 4-159 through 4-176D Chapter 6 Pages 6-1 through 6-6; 6-7 through 6-9; 6-75 through 6-103

MODULE AFU
UNIT UPDATE

CRITERION AND ENABLING OBJECTIVES

TASK IDENTIFICATION: 3.0

	C	RITERTON OBJECTIVE(S)	ENABLING OBJECTIVE(S)
3.1	Α.	Given a picture/drawing of the ACC switch panel assembly, identify the switch actions that can be used to select and display	3.1.1 Select from a list the purpose of the AFU; UPDATE message as being: TO MAINTAIN STATUS DATA ON FUS.
		the AFU; UPDATE message. The switch matrix is referenced by letters for rows and numbers for columns. The student is able to	3.1.2 Pick from a list the only AFU message that can be used to add a fire unit to the FU file as being: AFU;UPDATE.
		match the correct letter/number combination to select the required message format. The correct steps are:	3.2.1 State ON THE CED as being where the AFU; UPDATE message format will display after being selected.
		1. Depress switches A and 3.	3.2.2 Match the following mnemonics with their definition.
		2. Activate FORMAT COMMAND switch.	a. FU - Fire Unit Name
	D	As an altermate method wains the	b. WPN - Weapon Type
	В.	As an alternate method, using the above picture/drawing and a picture of the AFU directory	c. MSN - Mission of the Fire Unit
		message, the student can indicate the switch actions to take to	d. ZONE - Zone of Responsibility
		select the AFU; UPDATE message using the AFU directory message.	e. CORD - Fire Unit Coordinates
		The correct steps are:	f. APPL - Authorized Ammunition
		1. Depress switches H and 3.	g. Model - Weapon Model
		2. Activate FORMAT COMMAND switch.	h. WSTR - Weapon Strength
		3. After the AFU directory mes-	i. AZ - Azimuth of Fire
		sage is displayed on the CED, move cursor under letter U to	
		select fire unit update format.	k. READY - FU Available for Firing
		4. Activate the FORMAT SELECT switch.	Note: Explanation of additional mnemonics will be included within the instructional material for student review.

MODULE	AFU	
INITT	HPDATE	

CRITERION AND ENABLING OBJECTIVES

TASK IDENTIFICATION: 3.0

	CRITERION OBJECTIVE(S)		ENABLING OBJECTIVE(S)
1.2	Given information to update the current fire unit file, the student will identify the data to simulate the completion of the AFU; UPDATE input message. Data entries will include:	3.2.3	Pick from a list the entry that is always required in the AFU; UPDATI message unless information is being deleted from the fire unit file as being: FU.
	Fire unitWeapon type	3.2.4	output if a 16th fire unit is attempted to be added to a fire plan as being:
	 Mission of the fire unit 		PLAN: (name); MAX SIZE
	• Zone of responsibility	3.3.1	Select from a list the switch action to take to process the completed AFU; UPDATE message as
	• Fire Unit coordinates		being: C/ED CMPTR ACTION.
	Authorized ammunition		
	• Weapon model		
	• Weapon strength		
	• Azimuth of fire		
	• Referred deflection		
	• Fire unit status		
	(Data to be specified)		

MODULE	AFU
UNIT	UPDATE

CRITERION AND ENABLING OBJECTIVES

TASK IDENTIFICATION: 3.0

	CRITERION OBJECTIVE(S)		ENABLING OBJECTIVE(S)
3.3	The student can select from a list the results of taking computer action on an AFU; UPDATE message as being: a. FU file is updated.	3.4.1	Select from a list the message used to retrieve AFU information from the TACFIRE computer for display or edit as being: AFU; COMD.
	b. AFU; UPDATE message is printed on the ELP.	3.4.2	State ACTIVE as being a necessary requirement for a FU when using the AFU; COMD message.
	c. Information is transmitted to Div Arty. When presented with a list of pro-	3.4.3	State CED as being where the AFU; COMD message format will appear after selection.
	cedures to print the AFU 2203 FU REPORT output message, but with the steps in a scrambled order, the student can state the correct order in which these procedures are performed. The correct order is:	3.4.4	Pick from a list the error message output when the FU entered in the AFU; COMD message does not match an existing FU as being: FU NOT IN FILE.
	a. Select and display the AFU; COMD message.b. Enter FU and PRINT.	3.5.1	Pick from a list the number of fire units that are included in the AFU 2203 FU REPORT output message when PRINT is specified in the AFU; COMD message as being: ALL ACTIVE FU's.
3.5	c. Take C/ED CMPTR ACTION. Given an AFU 2203 FU REPORT output message as printed on the ELP, the student is able to interpret the contents of the message.		
	(To be developed)		

MODULE AFU
UNIT UPDATE

TEST ITEMS

TASK IDENTIFICATION: 3.0

CRITERION ITEM(S)	ENABLING ITEM(S)
3.1 A. Refer to Figure As a result of tactical operations, the current fire unit file needs to be updated. As a first step you need to select the message format so that you can enter the status data and update the current fire unit file. From the list of steps given below, first select the procedural steps required and then place them in the correct order. *a. Activate FORMAT COMMAND switch. b. Depress switches B and 3. *c. Depress switches A and 3. d. Activate FORMAT SELECT switch. e. Activate TRANSFER TO EDIT switch. (c, a)	*b. Maintain status data on FUs.

MODULE AFU
UNIT UPDATE

TEST ITEMS

TASK IDENTIFICATION: 3.0

CRITERION ITEM(S)	ENABLING ITEM(S)
Put in the correct order the procedural steps to select the AFU fire unit update message using the AFU directory message. 1. Activate the FORMAT SELECT switch. 2. Depress switches H and 3. 3. After the AFU directory message is displayed in the CED, move cursor under letter U to select fire unit update message format. 4. Activate the FORMAT COMMAND switch. (2, 4, 3, 1) 3.2 Your Bn has moved to a new location and the status of the fire units needs to be entered into the computer. You have already selected the AFU; UPDATE format message (Figure A) and now must enter the AFU; UPDATE message format.	3.2.2 A. From the following list match each mnemonic with its definition and function. 1. Weapon Type 2. Fire Unit Available for Firing 3. Weapon Strength 4. Referred Deflection 5. Zone of Responsibility 6. Authorized Ammunition DF (4) WPN (1) APPL (6) READY (2) ZONE (5) WSTR (3)

MODULE AFU
UNIT UPDATE

TEST ITEMS

TASK IDENTIFICATION: 3.0

	CRITERION ITEM(S)	ENABLING ITEM(S)
3.2	(Sample data and questions) Data to be included in Figure B.	3.2.2 B. From the following list match each mnemonic with its definition and function.
	• Btry A, 1st Bn, 40th Regiment	1. Fire Unit Coordinates
	• Weapon: 155 MM	2. Fire Unit Name
	• Mission: General Support	3. Mission of the Fire Unit
	• Zone of Responsibility: CROW	4. Weapon Model
	• Location: 5444038000	5. Azimuth of Fire
	• Authorized Ammo: HE	-MODEI. (<u>4</u>)
	• Type of Sight: 6400 Mil Sight	AZ (<u>5</u>)
	• Model: M114A1	CORD (<u>1</u>)
	• Weapon Strength: 6 Tubes	MSN (<u>3</u>)
	e Azimuth of Fire: 2100	FU (<u>2</u>)
	Referred Deflection: 2400 MilsReady for firing	3.2.3 Which is the following is always required in the AFU/UPDATE message when "delete" is specified?
	Refer to Figures A and B for the following questions:	*a. FU b. MSN
	Which of the following is the correct entry for APPL?	c. APPL
	a. APPL:AL/ ;	d. CORD
	b. APPL:CH/ ;	
	c. APPL: /HE;	
	*d. APPL:HE/ ;	

MODULE AFU
UNIT UPDATE

TEST ITEMS

TASK IDENTIFICATION: 3.0

CRITERION ITEM(S)	ENABLING ITEM(S)
CRITERION ITEM(S) 3.2 2. Which of the following is the correct entry for type of sight: a. ST:1; *b. ST:2; c. ST:3; 3. Which of the following is the correct entry for mission? a. MSN:GSR; b. MSN:DS; *c. MSN:GS; d. MSN:R; 4. Which of the following is the correct entry for weapon strength?	3.2.4 Which of the following error messages will be received if you attempt to add a 16th Fire Unit to a fire plan using the AFU; UPDATE message. a. PLAN NOT IN FILE. b. PLAN: (name); FU (name); CAT: (name); NOT MAINTAINED c. EXCEEDED NUMBER OF FIRE UNITS FOR PLAN: (name); *d. 'PLAN: (name); MAX SIZE 3.3.1 Which of the following SPA switches must be pressed to process the completed AFU; UPDATE message? a. RD CMPTR ACTION
*a. WSTR:6; b. WSTR:2; c. WSTR:TWO; d. WSTR:SIX;	c. XMIT d. TRANSFER TO EDIT 3.4.¹ To retrieve AFU information from the TACFIRE computer, which one of the following messages would you use: a. AFU;MASK b. AFU;ASR c. AFU;MV *d. AFU;COMD

MODULE AFU
UNIT UPDATE

TEST ITEMS

TASK IDENTIFICATION: 3.0

	CRITERION ITEM(S)	ENABLING ITEM(S)
3.3	Assume you have taken computer action on an AFU; UPDATE message. Answer the following questions concerning the results of this	3.4.2 In order to use the AFU; COMD message the FU must be (Active)? 3.4.3 The AFU; COMD message will appear on
3.4	 a. The FU file (is/is not) updated. b. A copy of the AFU; UPDATE (is/is not) printed on the ELP. c. The information is automatically transmitted to (Div Arty). Put in the correct order the steps to print the AFU 2203 FU REPORT output message. 	message does not exist, the TACFIRE computer will indicate: a. FU DELETED
	 a. Enter FU and PRINT. b. Select and display AFU; COMD message. c. Take C/ED CMPTR ACTION. (b, a, c) 	3.5.1 The number of fire units included in the AFU 2203 FU REPORT output message when PRINT is specified in the AFU; COM is: a. Only the FU specified. *b. All active FUs. c. Only the last FU entered. d. A total of three FUs.

MODULE AFU
UNIT UPDATE

TEST ITEMS

TASK IDENTIFICATION: 5.0

CRITERION ITEM(S)	ENABLING ITEM(S)
3.5 Refer to Figure which shows an AFU 2203 FU REPORT output message.	
1. What is the maximum elevation for Btry A? ()	
2. What is the sustained rate of fire for Btry A? ()	
3. What is the operational status of Btry A?	
*a. Ready	
b. Out of Action	
4. What is the weapon model for Btry A? ()	
(Data entries to be determined)	

MODULE	AFU
דותו	BAMOUP

TRAINING ANALYSIS INFORMATION SHEET

- 1. TASK IDENTIFICATION: 4.0
- 2. TASK: Update the ammunition inventory for an active FU to reflect ammunition received and verify data entries.
- 3. CONDITIONS: Given requirements to update current ammunition status of a FU to reflect ammunition received, select correct message format and fill in appropriate entries. Given the requirement to print and interpret AFU 2204 FU AMMO SUMMARY output message, select correct message format to print output message and interpret contents. Given different formatted test items concerning the updating of the ammunition status for a FU and AFU 2204 FU AMMO SUMMARY output message, provide correct response.
- 4. STANDASD: No errors.
- 5. TASK ANALYSIS:

TASK ELEMENTS	PREREQUISITE KNOWLEDGE OR SKILL REQUIREMENTS	SUL'PLEMENTAL TRAINING MATERIAL	REFERENCES
 4.1 Select and display AFU; BAMOUP message. 4.2 Identify entries for ammunition data. 4.3 Identify results of computer action. 4.4 Print AFU 2204 FU AMMO SUMMARY output message. 4.5 Interpret AFU 2204 FU ANMO SUMMARY contents. 	4.1 Know operation of ACC component parts. 4.2 Know operation of ACC component parts. 4.3 None. 4.4 Know how to select and display AFU user command message. 4.5 Able to decode mnemonics.	drawing of ACC. 2. Entry data and AFU; BAMOUP format	DTM 11-7440-240-10 Chapter 4 Pages 4-159 through 4-176D. Chapter 6 Pages 6-1 through 6-6; 6-21 through 6-26; 6-75 through 6-103.

MODULE AFU
UNIT BAMOUP

CRITERION AND ENABLING OBJECTIVES

TASK IDENTIFICATION: 4.0

	CRITERION OBJECTIVE(S)		ENABLING OBJECTIVE(S)
	CRITICAL OBSESSION S		Management of the second of th
4.1	Given a picture/drawing of the ACC switch panel assembly, identify the switch actions that can be used to select and display the AFU; BAMOUP	4.1.1	Pick from a list the purpose of the AFU; BAMOUP message as being: MAINTAIN AMMUNITION DATA FOR A FU.
,	message. The switch matrix is referenced by letters for rows and numbers for columns. The student is able to match the correct letter/	4.2.1	State ON THE CED as being where the AFU; BAMOUP will display after being selected.
	number combination to select the required message formar. The correct steps are:	4.2.2	Match the following mnemonics with their definition.
	a. Depress cwitches B and 3.		a. FU - Fire Unit
•	b. Activate "MAT COMMAND switch.		b. AMOR - Ammunition received
4.2			c. PROJA - Ammunition characteris- PROJB tics
	ammunition received, the student will identify the data to simulate the		d. PLOT - Powder characteristics
*	ompletion of the AFU;BAMOUP input lessage. Data entries will include: Fire Unit	Note:	Explanation of additional mnemonics will be included within the instructional material for student review.
! 	Ammunition received	4.2.3	Pick from a list the entry that is
	• Ammunition characteristics		always required in the AFU; BAMOUP message as being: FU.
]	• Powder characteristics	4.2.4	Pick from a list the error message output when the ammunition input in
	(Data to be specified)		the AFU; BAMOUP does not match the existing ammunition in the FU file
4.3	The student can select from a list the results of taking computer action on an AFU; BAMOUP message as being:	4.3.1	as being: AMMO NOT IN FILE. Select from a list the switch action
 	1. FU file is updated.		to take to process the completed AFU; BAMOUP message as being: C/ED
	AFU; BAMOUP message is printed on the ELP.		CMFTR ACTION.
	 Information is transmitted to Div Arty. 		

MODULE	AFU
UNIT _	BAMOUP

CRITERION AND ENABLING OBJECTIVES

TASK IDENTIFICATION: 4.0

	CRITERION OBJECTIVE(S)		ENABLING OBJECTIVE(S)
	cedures to print the AFU 2204 FU AMMO SUMMARY output message, but with the steps in a scrambled order, the srudent can state the correct order in which these procedures are per- formed. The correct order is: a. Select and display the AFU; COMD message. b. Enter PRINT and SUMS. c. Take C/ED CMPTR ACTION. Given an AFU 2204 FU AMMO SUMMARY output message as printed on the ELP, the student is able to interpret the contents of the message.	4.5.2	units that are included in the AFU 2204 AMMO SUMMARY output message as being: ALL ACTIVE FUS. Match the following mnemonics with their definitions: a. MSN - Mission of fire unit. b. ASRLVL - Maximum number of rounds a unit may fire per day. c. EXPEND - Total rounds expended. d. CATEGORY - Shell or fuse. e. AMOL - Critical ammo level. Explanation of additional mnemonics will be included within the instructional material for student

IAIS No. 3004

MCDULF AFU UNIT BAMOUP

TEST ITEMS

TASK IDENTIFICATION:

TASK ELEMENTS: 4.1 - 4.5

CRITERION ITEM(S)

- 4.1 Refer to Figure ... Assume one of 4.1.1 The AFU; BAMOUP message is used to: the fire units in your Bn has received additional supplies of ammunition which must be added to their ammunition inventory. As a first step you need to select the message format so that you can enter this information and update the ammunition status for the FU. From the list of steps given below, first select the procedural steps required and then place them in the correct order.
 - Activate FORMAT SELECT switch.
 - Activate FORMAT COMMAND switch.
 - Activate REPLACE switch.
 - Depress switches G and 3.
 - Depress switches B and 3.

(e, b)

4.2 One of your FUs has received a supply of ammunition to replace previously expended ammunition. You have already selected the AFU; BAMOUP format message (Figure C) and must now enter the information to update the ammunition inventory for the FU. Answer the following questions concerning the entry of data into the AFU; BAMOUP message format .

(Sample data and questions)

Data to be included in Figure D.

• Btry B, 1st Bn, 41st Regiment.

ENABLING ITEM(S)

- - a. Maintain data on backup units.
 - Assist Bn in maintaining Battery availability files.
 - Maintain ammunition data for a FU.
 - Set amount of ammunition that can be expended by each Battery.
- 4.2.1 After being selected by the appropriate switch actions, the AFU; BAMOUP message format will appear on the (RD/CED)?
- 4.2.2 From the following list, match each mnemonic with its definition and function.
 - Powder characteristics
 - Fire Unit
 - Ammunition received
 - Ammunition characteristics

FU (b)

PROJB (d)

PLOT (a)

PROJA (d)

AMOR (c)

MODULE AFU
UNIT BAMOUP

TEST ITEMS

TASK IDENTIFICATION: 4.0

CRITERION ITEM(S)	ENABLING ITEM(S)
4.2 • Accounting procedure is for ammunition received.	4.2.3 What item is <u>always</u> required in the AFU; BAMOUP message?
Ammunition characteristics are:	a. AMOR
Categories HEAl, HECl	b. PLOT
Lot designator H , F	c. PROJA
Weight 33.0, 33.0	*d. FU
Quantity 600, 400	4.2.4 If the ammo entered in the AFU; BAMOUP message does not match the existing ammo for the FU specified, the com-
Model M67	puter will indicate:
Lot Designation X	*a. AMMO NOT IN FILE
Quantity 100	b. PREVIOUS AMMO DELETED
Refer to Figures C and D for the following questions:	c. WRONG TRY AGAIN d. INVALID AFU MESSAGE
 Which of the following is the correct entry to specify the fire unit. 	4.3.1 The switch action to take to process the completed AFU; BAMOUP message is:
a. FU:B/ /1/41/ ;	a. RD CMPTR ACTION *b. C/ED CMPTR ACTION
b. FU: B/ /1/ /41; c. FU: /B/1/41/;	c. REPLACE
*d. FU: / /B/1 /41;	d. XMIT
2. Which of the following is the correct entry that indicates that the FU file is to be updated to reflect ammo received	
a. AMOR: ;AMOE: ;AMOH:X;	
b. AMOR: ; AMOE: X; AMOH: ;	

MODULF AFU
UNIT BAMOUP

TEST ITEMS

TASK IDENTIFICATION: 4.0

	CRITERION ITEM(S)	ENABLING ITEM(S)
4.2	*c. AMOR:X;AMOE: ;AMOH: ; d. AMOR:X;AMOE: ;AMOH:X; 3. Which of the following is the correct entry for entering the ammunition characteristics of the ammo received. *a. PROJA:HEA1/H/33 .Ø/6ØØ , HEC1/F/33 .Ø/4ØØ , b. PROJB:HEC1/H/33 .Ø/4ØØ , HEA1/F/33 .Ø/6ØØ , c. PROJA:33.Ø/H/HEA.1/6ØØ , 33.Ø/F/HEC.1/4ØØ , d. PROJA:HEA1/ / ./6ØØ , PEC1/ / ./4Ø¢ , 4. Which of the following is the correct entry in line 4 of the AFU;BAMOUP message for the powder characteristics a. PLOT:1ØØ /H/M67 , *b. PLOT:M67 /X/1ØØ , c. PLOT:M67 /Z/1ØØ , d. PLOT:1ØØ / /M67 , Assume you have taken computer action on an AFU;BAMOUP message. Answer the following questions concerning the results of this action.	4.5.1 The number of FUs in the AFU 2204 AMMO SUMMARY output message includes: a. Only the FU specified. *b. All active FUs. c. Only FUs that have received ammo during previous 30 day period. d. Only FUs whose supply includes nuclear as well as conventional ammo. 4.5.2 From the following list, match each mnemonic with its definition and function. a. Shell or fuze, b. Maximum number of rounds a unit can fire per day. c. Total rounds expended. d. Mission of fire unit. e. Critical ammo level. CATEGORY (a) AMOL (e) ASRLVL (b)

TAT'S No. 3004

MODULF AFU
UNIT BAMOUP

TEST ITEMS

TASK IDENTIFICATION: 4.0

to print the AFU 2204 AMMO SUMMARY output message for all ammo types for FU specified. a. Enter PRINT, SUMS, FU, and AMMO. b. Take C/ED CMPTR ACTION. c. Select and display AFU; COMD message. (c, a, b)			CRITERION ITEM(S)	ENABLING ITEM(S)
is not) printed on the ELP. 3. The information is automatically transmitted to (Div Arty)? 4. Put in the correct order the steps to print the AFU 2204 AMMO SUMMARY output message for all ammo types for FU specified. a. Enter PRINT, SUMS, FU, and AMMO. b. Take C/ED CMPTR ACTION. c. Select and display AFU; COMD message. (c, a, b) 5. Refer to Figure which shows an AFU 2204 AMMO SUMMARY output message. 1. The number of FUs is (3). 2. The mission of Btry B is (DS/CS/R)? 3. Btry A has expended (2135) rounds of ammo. 4. The greatest number of shells	.3	1.	The FU file (is/is not) updated.	
transmitted to (Div Arty)? .4 Put in the correct order the steps to print the AFU 2204 AMMO SUMMARY output message for all ammo types for FU specified. a. Enter PRINT, SUMS, FU, and AMMO. b. Take C/ED CMPTR ACTION. c. Select and display AFU; COMD message. (c, a, b) .5 Refer to Figure which shows an AFU 2204 AMMO SUMMARY output message. 1. The number of FUs is (3). 2. The mission of Btry B is (DS/GS/R)? 3. Btry A has expended (2135) rounds of ammo. 4. The greatest number of shells		2.		
to print the AFU 2204 ANMO SUMMARY output message for all ammo types for FU specified. a. Enter PRINT, SUMS, FU, and ANMO. b. Take C/ED CMPTR ACTION. c. Select and display AFU; COMD message. (c, a, b) Sefer to Figure which shows an AFU 2204 ANMO SUMMARY output message. 1. The number of FUs is (3). 2. The mission of Btry B is (DS/GS/R)? 3. Btry A has expended (2135) rounds of ammo. 4. The greatest number of shells		3.		
AMMO. b. Take C/ED CMPTR ACTION. c. Select and display AFU; COMD message. (c, a, b) .5 Refer to Figure which shows an AFU 2204 AMMO SUMMARY output message. 1. The number of FUs is (3). 2. The mission of Btry B is (DS/GS/R)? 3. Btry A has expended (2135) rounds of ammo. 4. The greatest number of shells	4.4	to out	print the AFU 2204 AMMO SUMMARY put message for all ammo types	
c. Select and display AFU; COMD message. (c, a, b) .5 Refer to Figure which shows an AFU 2204 ANMO SUMNAKY output message. 1. The number of FUs is (3). 2. The mission of Btry B is (DS/GS/R)? 3. Btry A has expended (2135) rounds of ammo. 4. The greatest number of shells		a.		
message. (c, a, b) .5 Refer to Figure which shows an AFU 2204 AMMO SUMMARY output message. 1. The number of FUs is (3). 2. The mission of Btry B is (DS/GS/R)? 3. Btry A has expended (2135) rounds of ammo. 4. The greatest number of shells		b.	Take C/ED CMPTR ACTION.	
.5 Refer to Figure which shows an AFU 2204 ANMO SUMMARY output message. 1. The number of FUs is (3). 2. The mission of Btry B is (DS/GS/R)? 3. Btry A has expended (2135) rounds of ammo. 4. The greatest number of shells		с.		
an AFU 2204 ANMO SUMMARY output message. 1. The number of FUs is (3). 2. The mission of Btry B is (DS/GS/R)? 3. Btry A has expended (2135) rounds of ammo. 4. The greatest number of shells		(<u>c</u> ,	a, b)	
 The mission of Btry B is (DS/GS/R)? Btry A has expended (2135) rounds of ammo. The greatest number of shells 	4.5	an .	AFU 2204 AMMO SUMMAKY output	
(DS/GS/R)? 3. Btry A has expended (2135) rounds of ammo. 4. The greatest number of shells		1.	The number of FUs is (3) .	
rounds of ammo. 4. The greatest number of shells		2.		
		3.		
		4.		

TAIS	No.	3005

MODULE	AFU
IINTT	MV

TRAINING ANALYSIS INFORMATION SHEET

- 1. TASK IDENTIFICATION: 5.0
- 2. TASK: Enter current muzzle velocities for a FU and verify data entries.
- 3. CONDITIONS: Given requirement to enter current muzzle velocities for a FU, select correct message format and fill in appropriate entries. Given different formatted test items concerning the updating of current muzzle velocities for a FU and verification of entries, provide correct response.
- 4. STANDARD: No errors.

5. TASK ANALYSIS:

	TASK ELEMENTS	PREREQUISITE KNOWLEDG OR SKILL REQUIREMENTS	SUPPLEMENTAL TRAINING MATERIAL	REFERENCES
5.1	Select and display AFU;MV message.	5.1 Know operation of ACC component part	1. Picture/ s. drawing of ACC.	DTM 11-7440- 240-10
5.2	Identify entries for muzzle velocity data.	5.2 Know operation of ACC component part	2. Picture of s. AFU directory message.	Chapter 4 Pages 4-159 through 4-176D
5.3	Identify results of computer action.	5.3 None.	3. Picture of AFU 2203 FU REPORT output	Chapter 6 Pages 6-1 through 6-6;
5.4	Print AFU 2203 FU REPORT output message.	5.4 Know how to select and display AFU us command message.	message.	6-39 through 6-42; 6-75 through 6-103
5.5	Interpret AFU 2203 FU REPORT output message.	J	material to be developed as required.	
			•	
			1	

MODULE	AFI'
UNIT	MV

CRITERION AND ENABLING OBJECTIVES

TASK IDENTIFICATION: 5.0

TASK ELEMENTS: 5.1 - 5.5

CRITERION OBJECTIVE(S)

5.1 Given a picture/drawing of the ACC switch panel assembly and a picture of the AFU directory message, identify the switch actions and entries to make to select and display the AFU; MV message. The switch matrix is referenced by letters for rows and numbers for columns. The student is able to match the correct letter/number combination to select the AFU directory message format and then identify the actions to take to select and display the desired AFU message.

The correct steps are:

- 1. Depress switches H and 3.
- 2. Activate FORMAT COMMAND switch.
- After the AFU directory message is displayed on the CED, move :ursor under the first letter M.
- -4. Activate the FORMAT SELECT switch.

ENABLING OBJECTIVE(S)

- 5.1.1 Pick from a list the purpose of the AFU; MV message as being: TO INPUT MUZZLE VELOCITY.
- 5.2.1 State STANDARD MUZZLE VELOCITY is used by the TACFIRE Computer when specific muzzle velocities are not available for ballistic computations.

MODULE	AFU	_
IINTT	MV	

CRITERION AND ENABLING OBJECTIVES

TASK IDENTIFICATION: 5.0

 	CRITERION OBJECTIVE(S)	ENABLING OBJECTIVE(S)
5.2	Given information representing muzzle velocities for a FU the student will identify the data to simulate the completion of the AFU; MV input message. Data entries will include:	
i , i	• Fire Unit	
	Muzzle Velocity Specification	
	(Data to be specified)	
5.3	The student can select from a list the results of taking computer action on an AFU;MV message as being:	
1	1. FU file is updated	
	2. AFU;MV message is printed on the ELP	

MODULE	AFU
INIT	XIV

CRITERION AND ENABLING OBJECTIVES

TASK IDENTIFICATION: 5.0

	CRITERION OBJECTIVE(S)	ENABLING OBJECTIVE(S)
5.4	When presented with a list of procedures to print the AFU 2203 FU REPORT output message, but with the steps in a scrambled order, the student can state the correct order in which these procedures are performed. The correct order is: a. Select and display the AFU; COMD	
	message.	
	b. Enter FU and PRINT.	
•	c. Take C/ED CMPTR ACTION.	
5.5	Given the AFU 2203 FU REPORT output message as printed on the ELP, the student is able to interpret the contents of the message.	
	(To be developed)	

TMS No. 3005

MODULF AFU
UNIT MV

TEST ITEMS

TASK IDENTIFICATION: 5.0

TASK ELEMENTS: 5.1 - 5.5

CRITERION ITEM(S) ENABLING ITEM(S) 5.1 Refer to Figures 5.1.1 The purpose of the AFU; MV message is As a result of extensive firing of weapons in one of the FUs in your Bn current muzzle velocity values must a. Input maintenance requirements. be entered into the FU file. Put in the correct order the procedural Input munition allotments. steps to select the AFU message format to enter current muzzle veloci-Input recommended muzzle ties for a FU. velocities. a. After the AFU directory message *d. Input specific muzzle velocities. is displayed on the CED, move the cursor under the first 5.2.1 When specific muzzle velocities are not available for ballistic computaletter M. tion, the TACFIRE computer uses: b. Activate the FORMAT COMMAND Standard muzzle velocities. switch. c. Activate the FORMAT SELECT Old muzzle velocities. switch. Extrapolated muzzle velocities. d. Depress switches H and 3. d. Muzzle velocities are ignored in ballistic computations. (d,b,a,c)5.2 Due to extensive firing, the muzzle velocities for the weapons of one of the FUs in your Bn needs to be updated. You have already selected the AFU; MV format message (Figure E) and must now enter the current muzzle velocities. Answer the following questions concerning the entry of data into the AFU; MV message format. (Sample data and questions)

1418 No. 3005.

MODULF AFU
UNIT MV

TEST ITEMS

TASK IDENTIFICATION: 5.0

CRITERION ITEM(S)	ENABLING ITEM(S)
5.2 Data to be included in Figure F.	
Btry A, 1st Bn, 40th Regiment	
• Muzzle ve locity specification.	
Muzzle velocity - (to be deter- mined)	
Shell Category - HEAl	
Shell and Powder Lot - X	
Charge Number - 1 through 5	
Refer to Figures E and F for the following questions.	
 Which of the following is the correct entry for specifying the fire unit in the AFU;MV message. 	
a. FU:A/1/ /4Ø/ ;	
b. FU: /A/1/4Ø/ ;	
*c. FU: / /Λ/1 /4Ø ;	
d. FU: / /A/40/1 ;	
	•

MODULE AFU UNIT MV

TEST ITEMS

TASK IDENTIFICATION: 5.0

CRITERION ITEM(S)	ENABLING ITEM(S)
5.2 2. Which of the following is the correct entry to specify the muzzle velocity for charge 5?	
*a. MV2:XXX.X/HEA1/X/X/5,	
b. MV1:XXX.X/HEA1/X/X/5,	
c. MV2:HEA.1/XXXX/X/X/5,	
d. MV2:XXX.X/HEA1/X/5/X,	
(Data entries to be determined)	
3. Which of the following is the correct entry to specify the muzzle velocity for charge 1?	
a. MV1:XXX.X/HEA1/X/X/1,	
*b. MV1:XXX.X/HEA1/X/X/1,	
c. MV1:XXX.X/HEA1/1/X/X,	
d. MV1:XXX.X/HEA1/1/1/1,	
(Data entries to be determined)	

MODULE AFU UNIT MV

TEST ITEMS

TASK IDENTIFICATION: 5.0

	CRITERION ITEM(S)	ENABLING ITEM(S)
5.3	Pick the statements that indicate results of taking computer action an AFU; MV message to input specifi muzzle velocities for weapons in a FU.	on
	*a. The FU file is updated.	
	b. The Div Arty file is updated.	
	c. The DPM is activated.	
	*d. The AFU; MV message is printed the ELP.	in
	 e. Muzzle velocities at the designated FU are verified. 	
	(a, d)	
5.4	Put in the correct order the steps to print the AFU 2203 FU REPORT output message.	
	a. Take C/ED CMPTR ACTION.	
	b. Enter FU and PRINT.	
	 Select and display the AFU; COM message. 	D
	(c, b, a)	
5.5	Refer to Figure, which shows AFU 2203 FU REPORT output message.	an
	(Test items to be developed)	

TAL	S N	ο.	3	0	06	j

MODULE	AFU
UNIT	MASK

TRAINING ANALYSIS INFORMATION SHEET

- 1. TASK IDENTIFICATION: 6.0
- 2. TASK: Update mask data for the fire unit (and fire unit planning files) and verify data entries.
- 3. CONDITIONS: Given requirement to enter mask data for a FU into th. Fire Unit (and Fire Unit Planning Files), select correct message format and fill in appropriate entries.

Given different formatted test items concerning the updating of mask data for a FU and verification of entries, provide correct response.

4. STANDARD: No errors.

5. TASK ANALYSIS:

	TASK ELEMENTS		REQUISITE KNOWLEDGE SKILL REQUIREMENTS	T	UPPLEMENTAL RAINING ATERIAL	REFERENCES
6.1	Select and display AFU;MASK message.	6.1	Know operation of ACC component parts.	1.	Picture/ drawing of ACC.	DTM 11-7440- 240-10
6.2	Identify entries to enter a minimum quadrant elevation.	6.2		2.	Entry data and AFU; MASK format.	Chapter 4 Pages 4-150 through 4-176D.
6.3	Identify results of computer action.	6.4	Know function of	3.	Additional material to	Chapter 6 Pages 6-1
6.4	Verify data entries.		PRIORITY MESSAGE, CYCLE MESSAGES and DELETE switches.		be developed as required.	through 6-6; 6-27 through 6-31; 6-75 through 6-103.

MODULE	AFU	
UNIT	MASK	

CRITERION AND ENABLING OBJECTIVES

TASK IDENTIFICATION: 6.0

	CRITERION OBJECTIVE(S)		ENABLING OBJECTIVE(S)
6.1	Given a picture/drawing of the ACC switch panel assembly, identify the switch actions that can be used to select and display the AFU; MASK message. The switch matrix is	6.1.1	Select from a list the purpose of the AFU; MASK input message as being: TO ENTER OR UPDATE MASK DATA OF EACH FIRE UNIT.
	referenced by letters for rows and numbers for columns. The student is able to match the correct letter/	6.1.2	Select from a list the maximum number of masks which can be stored for any fire unit as being: EIGH1.
	number combination to select the required message format. The correct steps are:	6.2.1	Match the following mnemonics with their definition.
	a. Depress switches D and 3.		MASKA - Mask data
	b. Activate FORMAT COMMAND switch.		CRDA - Coordinates of the mask
6.2	Given information to enter a minimum quadrant elevation, the student will identify the data to simulate the completion of an AFU; MASK input message. Data entries will include:		Note: Explanation of additional mnemonics will be included within the instructional material for student review.
	Fire UnitPlan Name	6.2.2	Select from a list the entry that is always required in the AFU; MASK message as being: FU.
6.3	Mask Data(Data to be specified)The student can select from a list the		Select from a list the mnemonic fields within the AFU; MASK message that are never entered at Bn as being: CRDA, CRDB, CRDC and CRDD.
	results of taking computer action on an AFU; MASK message as being:	6.3.1	Select from a list the switch action to take to process the completed AFU; MASK as being: C/ED CMFTR
	a. FU file is updated.		ACTION.
	b. AFU; MASK is printed on the ELP.		

MODULE	AFU
UNIT	MASK

CRITERION AND ENABLING OBJECTIVES

TASK IDENTIFICATION:

6.0

TASK ELEMENTS:

6.1 - 6.4

CRITERION OBJECTIVE(S)

- 6.4 When presented with a list of procedures to verify data entered into an AFU; MASK message, but with the steps in a scrambled order, the student can state the correct order in which those procedures are performed. The correct order is:
 - Select and display AFU; COMD message.
 - b. Specify FU name and EDIT.
 - c. Take C/ED CMPTR ACTION.
 - d. Use PRIORITY MESSAGE switch and CYCLE MESSAGES switch to display the AFU; MASK message on the RD.
 - e. Verify entries.
 - f. Take DELETE action to remove the AFU; MASK message from the RD.

ENABLING OBJECTIVE(S)

- 6.3.2 Select from a list the error and warning messages received (FM;5205) when a mask violation occurs as being:
 - a. (FU name) MASK VIOLATION.
 - b. (FU name) MASK FORCED HI ANGLE.
- 6.4.1 Pick from a list the entries in the FU file that should be adjusted whenever a fire unit changes location as being: MASK.
- 6.4.2 State ON THE CED as being where editing (changing) of the AFU; MASK message is accomplished.

MODULE AFU
UNIT MASK

TEST ITEMS

TASK IDENTIFICATION:

6.0

TASK ELEMENTS:

6.1 - 6.4

CRITERION ITEM(S)

- 6.1 Refer to Figure . Assume the FDO has requested that you enter the masks for each fire unit in your battalion. As a first step you need to select the message format so that you can enter the mask information for each fire unit into the FU file. From the list of steps given below, first select the procedural steps required and then place them in the correct order.
 - *a. Depress switches D and 3.
 - b. Activate PRIORITY MESSAGE switch.
 - Activate C/ED CMPTR ACTION switch.
 - *d. Activate FORMAT COMMAND switch.
 - e. Depress switches E and 3.

(a, d)

6.2 You have just been handed a list of minimum quadrant elevations which will clear surrounding terrain. You have already selected and displayed an empty AFU; MASK (Figure G) message format on the CED and must now enter the information. Answer the following questions concerning the entry of data into the AFU; MASK message format.

(Sample data and questions)

ENABLING ITEM(S)

- 6.1.1 The purpose of the AFU; MASK input message is:
 - a. To transmit FU masks to Div Artv.
 - b. To establish criteria for any expenditure.
 - *c. To enter or update mask data for each Bn FU.
 - d. To enter NFLs.
- 6.1.2 What is the maximum number of masks which can be entered for a single fire unit?
 - a. 4
 - *b. 8
 - c. 15
 - d. 17
- 6.2.1 A. The mnemonic MASKA in the AFU; MASK message format means:
 - 1. Coordinates of the mask, line Λ .
 - 2. Mask requesting agency.
 - *3. Mask data, line A.
 - 4. Mask adjustment.

. .

MODULE AFU UNIT MASK

TEST ITEMS

TASK IDENTIFICATION: 6.0

CRITERION ITEM(S)		ENABLING ITEM(S)
5.2 Data to be included in	Figure H:	6.2.1
• FU: A/1/40		B. The mnemonic CRDA in the AFU; MASK message format means:
• MASK Number 1 Left azimuth Right azimuth Range Elevation • MASK Number 2 Left azimuth Right azimuth Right azimuth Range Elevation (Mask data to be Refer to Figures G and H for following questions: A. Which of the following entry to specify the FU AFU; MASK message? *1. FU: / /A/1 /40; 2. FU: /A/1/40/; 3. FU:A/ /1/40/; 4. FU: / / /40/1ST;	r the	1. Coordinates of forward observer. *2. Coordinates of the mask, line A. 3. Coordinates of the fire unit. 4. Mask data, line A. 6.2.2 Which of the following mnemonics always must have an entry in an AFU; MASK message? *a. FU. b. PLAN.

MODULE AFU UNIT MASK

TEST ITEMS

TASK IDENTIFICATION: 6.0

CRITERION ITEM(S)	ENABLING ITLM(S)			
	ENABLING ITEM(S) 6.3.1 Which of the following SPA switches should be pressed to process an AFU; MASK message? *a. C/ED CMPTR ACTION. b. TRANSFER TO EDIT. c. RD CMPTR ACTION. d. SAVE. 6.3.2 Which one of the following warning messages will be received when a mask violation occurs? a. INVALID AFU MESSAGE. *b. MASK VIOLATION. c. TGT NOT IN BN ZONE. d. HAS ASR VIOLATION. 6.4.1 Updated mask entries should be made for a fire unit:			
*c. The FU file is updated. d. The masks are plotted on the DPM. (a, c)	for a fire unit: a. Every 24 hours. b. Whenever a new supply of ammo is received. *c. Whenever a fire unit changes location. d. Following end of mission messages.			

MODULE AFU UNIT MASK

TEST ITEMS

TASK IDENTIFICATION: 6.0

CRITERION ITEM(S)	ENABLING ITEM(S)
for Btry C be modified. You have made the modification using the AFU;MASK message and now wish to verify the data by using the AFU;COMD message. Listed below in a scrambled order are the steps to take ro verify the contents of the AFU;MASK message. Place the steps in the correct order. a. Use PRIORITY MESSAGE switch and CYCLE MESSAGES switch to display the AFU;MASK message on the RD. b. Take C/ED CMPTR ACTION. c. Take DELETE action to remove the AFU;MASK message from the RD. d. Verify entries. e. Select and display AFU;COMD message. f. Specify FU name and EDIT. 1. The first step is (e)? 2. If the second step (Step ?) is f, Specify FU name and EDIT, the next step (Step 2) is (b)? 3. If the fifth step (Step 5) is d, Verify entries, the last step (Step 6) in this sequence is (c)?	6.4.2 On which ACC display (RD or CED) must the AFU; MASK message be displayed so that changes (editing) can take place? (CED)

TAIS	No.	3007
*****		3007

MODULE	AFU
UNIT	REG

TRAINING ANALYSIS INFORMATION SHEET

- 1. TASK IDENTIFICATION: 7.0
- 2. TASK: Process an ammunition and fire unit registration data input message and delete registration data for a fire unit from the fire unit file.
- 3. CONDITIONS: Given a situation to process a registration data input message, identify correct procedures. Given the requirement to delete registration data for a fire unit from the fire unit file, select correct message format, make entries and take computer action. Given different formatted test items concerning the processing of registration data and deleting registration data from the fire unit file, provide correct response.
- 4. STANDARD: No errors.

5. TASK ANALYSIS:

	TASK ELEMENTS		EREQUISITE KNOWLEDGE SKILL REQUIREMENTS	TR	PPLEMENTAL AAINING TERIAL	REFERENCES
7.1	Process AFU registration message.	7.1	Know manual procedures for processing registration missions	1.	Picture/ drawing of ACC.	DTM 11-7440- 240-10
7.2	Identify mnemonics of AFU; REG message.		and operation of ACC component parts.	2.	Entry data and AFU;REG	Chapter 4 Pages 4-159 through
7.3	Take computer action and identify results.	7.2	Able to decode mnemonics.		format.	4-176D
7.4	Delete registration entries for a fire unit.	7.3	None. Know operation of ACC component parts.	3.	Additional material to be developed as required.	Chapter 6 Pages 6-1 through 6-6; 6-33 through 6-38; 6-75 through 6-103.

MODULE	AFU
UNIT	REG

CRITERION AND ENABLING OBJECTIVES

TASK IDENTIFICATION: 7.0

CRITERION OBJECTIVE(S)	ENABLING OBJECTIVE(S)		
7.1 A. When presented with a list of sequence statements describing the results of completing a precision registration mission, but with the steps in a scrambled order, the student can state the correct order in which the steps occur. The correct order is:	MAINTAIN REGISTRATION DATA.		
1) Computer generates an AFU; REG message.	7.2.1 Match the following mnemonics with their definition:		
2) The AFU; REG message is placed in the receive queue. B. The student is able to pick from a list the procedures to display the above AFU; REG message on the RD as being: 1) Press PRIORITY MESSAGE switch. 2) Press CYCLE MESSAGES switch if other messages are in the receive queue. 7.2 Given an AFU; REG message as presented on the RD, the student is able to interpret the contents of the message. (To be developed)	f. RNGCR - Range correction g. TIMECR - Time correction h. DEFLCR - Deflection correction		

MODULE	AFU				
INTT	REC				

CRITERION AND ENABLING OBJECTIVES

TASK IDENTIFICATION:

7.0

TASK ELEMENTS:

7.1 - 7.4

CRITERION OBJECTIVE(S) ENABLING OBJECTIVE(S) The student can select from a list the 7.3.1 Select from a list the switch action results of taking computer action on to take to process an AFU: REG output an AFU; REG output message as being: message as being: RD CMPTR ACTION. Fire Unit File is updated. 7.4.1 Given a picture/drawing of the ACC switch panel assembly, identify the switch actions that can be used to b. Completed registration massage is transmitted to fire btry. select and display the AFU; REG message. The switch matrix is referenced by letters for rows and 7.4 When presented with a list of procedures to delete registration data numbers for columns. The student is able to match the correct letter/ from the Fire Unit File, but with the number combination to select the procedures in a scrambled order, the required message format. The correct student can state the correct order in steps are: which the procedures are performed. The correct order is: a. Depress switches E and 3. Select and display AFU; REG message b. Activate FORMAT COMMAND switch. format. Specify FU and DELETE to delete 7.4.2 Select from a list the switch action all registration data. Specify to take to process an AFU; REG input message as being: C/ED CMPTR ACTION. FU, DELETE, LOT and CHG to delete only specific data entries. 7.4.3 Select from a list the error message received when the maximum number of c. Take C/ED CMPTR ACTION. registration corrections entered for a fire unit exceeds four as being: PLAN: (NAME); FU: / / / REG-1-STORAGE FULL

MODULE AFU
UNIT REG

TEST ITEMS

TASK IDENTIFICATION:

7.0

TASK ELEMENTS:

7.1 - 7.4

CRITERION ITEM(S)

- 7.1 A. One of your fire units has fired the last round for a precision registration mission. Pick the statements that indicate the action taken by the TACFIRE computer as a result of the precision registration being completed.
 - *1. Computer generates an AFU; REG message.
 - 2. REGISTRATION COMPLETED is printed on the ELP.
 - *3. An AFU; REG message is placed in the receive queue.
 - 4. The registration points are plotted on the DPM.

(1, 3)

- B. 1. Which of the following switches should be pressed to display an AFU; REG message that is in the receive queue?
 - *a. PRIORITY MESSAGE switch.
 - b. RD CMPTR ACTION switch.
 - c. RD XMIT switch.
 - d. PAGE switch.
 - 2. If the AFU; REG message does not display after pressing the PRIORITY MESSAGE switch, you must use the (CYCLE MESSAGES/PAGE) switch to step through the receive queue.

ENABLING ITEM(S)

- One of your fire units has fired 7.1.1 Which of the following is the purpose the last round for a precision of the AFU; REG message?
 - *a. To maintain registration data.
 - b. To conduct registration missions.
 - c. To print registration data.
 - d. To display registration data on the DPM.
 - 7.1.2 What is the maximum number of registration corrections for each fire unit which can be stored in the TACFIRE computer?
 - *a. 4
 - b. 8
 - c. 15
 - d. 17

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MODULE AFU UNIT REG

TEST ITEMS

TASK IDENTIFICATION: 7.0

	CRITERIO	N ITEM(S)			ENABI	LING ITEM(S)
7.2		are which shows an age as it appears on the	7.2.1	Α.	each	n the following list, match n mnemonic with its definition function.
	1. What is	the range correction?			1.	Deflection correction
	(100 met	ers)			2.	Fuze categorv
		registration conducted r high angle of fire?			3.	Charge number
	(1ow)	ings of the			4.	Shell category
		range was the			5.	Range '
		tion conducted?				FZE (2)
	(10000 m	eters)				SHL <u>(4)</u>
		dard MET data or MET data used?				DEFLCR (1)
	(standar	d MET)				RG (5)
	 	1				CHG (3)
				В.		er to Figure which shows AFU; REG message.
					1.	After which mnemonic will the range correction appear?
						(RNGCR)
					2.	Which rmemonic is used to indicate the time correction?
						(TIMECR)
					3.	Which mnemonic is used to indicate the shell and powder lot used to conduct the registration?
						(LOT)

MODULE AFU
UNIT REG

TEST ITEMS

TASK IDENTIFICATION:

7.0

TASK ELEMENTS:

7.1 - 7.4

CRITERION ITEM(S)

- 7.3 Which two of the following are the results of taking computer action on an AFU; REG output message?
 - a. An AFU; MFR message is generated by the computer.
 - b. The registration corrections are plotted on the DPM.
 - *c. The Fire Unit File is updated.
 - *d. The AFU; REG message is transmitted to fire btry. $(\underline{c}, \underline{d})$
- 7.4 Your FDO wishes to conduct another registration mission. However, the Fire Unit File already contains four registration corrections for the FU that is to conduct the registration mission. One correction must be deleted. Place the following steps for deleting a registration correction from the Fire Unit File in the correct order.
 - a. Press C/ED CMPTR ACTION.
 - b. Select and display AFU; REG message format.
 - c. Specify FU, DELETE, LOT and CHG.
 - (b, c, a)

ENABLING ITEM(S)

- 7.3.1 Which of the following switches should be pressed to process an AFU; REG output message following a registration mission?
 - a. XMIT.
 - *b. RD CMPTR ACTION.
 - c. C/ED CMPTR ACTION.
 - d. RD XMIT.
- 7.4.1 A. You wish to display an AFU; REG message format. What two format/command matrix switches should you press to select the message format?

(E, 3)

B. After selecting the AFU; REG message format what switch must be pressed to display the message?

(FORMAT COMMAND)

- 7.4.2 Which of the following switches should be pressed to process an AFU; REC input message?
 - a. RD CMPTR ACTION.
 - b. XMTT.
 - *c. C/ED CMPTR ACTION.
 - d. RD XMIT.

MODULE AFU UNIT REG

TEST ITEMS

TASK IDENTIFICATION: 7.0

CRITERION ITEM(S)	ENABLING ITEM(S)
	7.4.3 Which of the following error messages are received when the number of registration corrections for a fire unit exceeds four?
	a. PLAN:(NAME);FU: / / / ; REG-1-FIFTH REG REJECTED
	b. PLAN: (NAME); FU: / / / ; REG-1-CORRECT EXCEEDS MAX
	c. PLAN: (NAME); FU: / / / ; REG-1-FIRE UNIT FILE FULL
	*d. PLAN: (NAME); FU: / / / ; REG-1-STORAGE FULL

MODULE	AFU
UNIT	AMOL/ASF

TRAINING ANALYSIS INFORMATION SHEET

- 1. TASK IDENTIFICATION: 8.0
- 2. TASK: Modify the critical ammo level for a specific Fire Unit, set the available supply rate for all active units containing a specific organic weapon and verify data entries.
- 3. CONDITIONS: Given requirement to modify the critical ammo level for a FU, select correct message format and fill in appropriate entries. Given requirement to set the available supply rate for a specific weapon, select correct message format and fill in appropriate entries. Given different formatted test items concerning the modification of the critical ammo level for a FU, setting the available daily supply rate for a FU and AFU 2204 FU AMMO SUMMARY output message, provide correct response.
- 4. STANDARD: No errors.
- 5. TASK ANALYSIS:

	TASK ELEMENTS		EREQUISITE KNOWLEDGE SKILL REQUIREMENTS	TR	PPLEMENTAL LAINING LTERIAL	REFERENCES
8.1	Select and display AFU; AMOL message.	8.1	Know operation of ACC component parts.	l.	Picture/ drawing of ACC.	DTM 11-7440-240 -10
8.2	Identify entries for Ammo levels.	8.2	Know operation of ACC component parts.	2.	Entry data	Chapter 4 Pages 4-159 through 4-176D
8.3	Identify results of computer action.	8.3	None.		format.	Chapter 6
8.4	Select and display AFU;ASR message.	8.4	Know operation of ACC component parts.	3.	Entry data and AFU; ASR format.	Pages 6-1 through 6-6; 6-43 through
8.5	Identify entries for available supply rates.		Know operation of ACC component parts.	4.	Picture of AFU 2204 FU	6-49; 6-75 through 6-103.
8.6	Identify results of computer action.	8.6	Know operation of ACC component parts. Know how to select and		AMMO SUMMARY output message.	
8.7	Print AFU 2204 FU AMMO SUMMARY output message.		display AFU user command message.	5.	Additional material to be developed	
8.8	Interpret AFU 2204 FU AMMO SUMMARY contents.	8.8	Able to decode mnemonics.	! !	as required.	
L		<u> </u>				

MODULE AFU UNIT ___AMOL/ASR

CRITERION AND ENABLING OBJECTIVES

TASK IDENTIFICATION: 8.0

	CRITERION OBJECTIVE(S)		ENABLING OBJECTIVE(S)
8.1	Given a picture/drawing of the ACC switch panel assembly, identify the switch actions that can be used to	8.1.1	Pick from a list the purpose of the AFU; AMOL message as being: SET CRITICAL AMMO LEVEL FOR A FU.
	select and display the AFU; AMOL message. The switch matrix is referenced by letters for rows and numbers for columns. The student is able to match the correct letter/number combination to select the required message format. The correct	8.2.1	Match the following mnemonics with their definition: a. SHELS - Shell description b. FUZES - Fuze description
	steps are:		
	a. Depress switches A and 4.	Note:	Explanation of additional mnemonics will be included within the instructional material for student
	b. Activate FORMAT COMMAND switch.		review.
8.2	Given information to change the critical ammo level of a FU, the student identifies the data to simulate the completion of the	8.2.2	Pick from a list the default value for the critical ammo level as being: $\emptyset \emptyset \emptyset$.
	AFU; AMOL input message. Data entries will include:	8.2.3	Pick from a list the action that occurs when the ammo supply for a shell or fuze category drops below
	• Fire unit		the critical level as being: A WARNING MESSAGE IS OUTPUT ON THE ELP
	• Shell Description		IN THE FORM PLAN: BBBBBB;
	• Fuze Description		FU:B/B/B/BB/BBB; CAT:BBBB; AMOL VIOLATED.
	(Data to be specified)	8.3.1	
8.3	The student can select from plist the results of taking computer action		process the completed AFU; AMOL message as being: C/ED CMPTR ACTION.
	on an AFU; AMOL message being:	8.4.1	Pick from a list the purpose of the AFU; ASR message as being: TO
	a. FU file is updated.]	ESTABLISH THE TOTAL NUMBER OF ROUNDS
	b. AFU; AMOL message is printed on the ELP.		AN FU IS AUTHORIZED TO USE ON A DAILY BASIS.
1		1	

MODULE AFU
UNIT AMOL/ASR

CRITERION AND ENABLING OBJECTIVES

TASK IDENTIFICATION:

8.0

TASK ELEMENTS:

8.1 - 8.8

ENABLING OBJECTIVE(S) CRITERION OBJECTIVE(S) 8.4 Given a picture/drawing of the ACC 8.5.1 Pick from a list the function of the switch panel assembly, identify the mnemonic ASRLVL as being: SPECIFIES switch action that can be used to MAXIMUM NUMBER OF ROUNDS AN FU IS select and display the AFU; ASR AUTHORIZED PER DAY. message. The switch matrix is referenced by letters for rows ar! 8.5.2 Pick from a list the default value numbers for columns. The student is of the available supply rate as able to match the correct letter/ being: 9999. number combination to select the required message format. The correct 8.5.3 Select from a list the action that steps are: occurs when a FU expends more rounds than the daily authorization as Depress switches C and 3. being: A WARNING MESSAGE IS OUTPUT ON THE ELP. Activate the FORMAT COMMAND switch. 8.5 Given information to set the maximum number of daily rounds a FU is authorized to fire the student will identify the data to simulate the completion of the AFU; ASR input message. Data entries will include: Fire Unit or Weapon Type Supply Rate (Data to be specified) 8.6 The student can select from a list the results of taking computer action on an AFU; ASR message as being: a. Specific FU file is updated or all active FU files for a specific weapon type are updated. b. AFU; ASR message is printed on the ELP.

MODULE AFU

UNIT ____AMOL/ASR

CRITERION AND ENABLING OBJECTIVES

TASK IDENTIFICATION: 8.0

	CRITERION OBJECTIVE(S)	ENABLING OBJECTIVE(S)
8.7	When presented with a list of procedures to print the AFU 2204 FU AMMO SUMMAPY output message, but with the steps in a scrambled order, the student can state the correct order in which these procedures are performed. The correct order is: a. Select and display the AFU; COMD message.	
	b. Enter PRINT and SUMS.	
	c. Take C/ED CMPTR ACTION.	
8.8	Given an AFU 2204 FU AMMO SUMMARY output message as printed on the ELP, the student is able to interpret the contents of the message. (To be developed)	

MODULE <u>AFU</u>
UNIT <u>AMOL/A</u>SR

TEST ITEMS

TASK IDENTIFICATION:

8.0

TASK ELEMENTS:

8.1 - 8.8

CRITERION ITEM(S)

- Due to tactical considerations, the critical ammo level for one of the FUs in your Bn has been changed. As a first step, you need to select the message format so this change for the FU can be entered into the TACFIRE computer. From the list of steps below, first select the procedural steps required and then place them in the correct order.
 - a. Depress switches C and 3.
 - *b. Depress switches A and 4.
 - c. Activate REPLACE switch.
 - *d. Activate FORMAT COMMAND switch.
 - e. Activate FORMAT SELECT switch.

(b, d)

8.2 Assume that due to tactical considerations, the FDO has decided to change the critical ammo level for specific shell and fuze categories for a FU. You have already selected the AFU; AMOL format message (Figure I) and must now make the entries to set the critical ammo level for the required shell and fuze categories. Answer the following questions concerning the entry of data into the AFU; AMOL message format.

(Sample data and questions)

ENABLING ITEM(S)

- 8.1.1 The purpose of the AFU; AMOL message is to:
 - a. Set the amount of ammo on hand for a FU.
 - *b. Set the critical ammo level for a FU.
 - c. Set the type of shells/fuzes a FU may have in its inventory.
 - d. Set the correct shell/fuze combination for each FU.
- 8.2.1 To specify the critical level for fuze categories, you enter the data following the mnemonic (SHELS/FUZES)?
- 8.2.2 The default value when the critical level for shell or fuze categories is not specified in the AFU; AMOL message is:
 - a. 1000
 - b. 500
 - c. 25Ø
 - *d. ØØØ

TVIS No. 3008

MODULF AFU
UNIT AMOL/ASR

TEST ITEMS

TASK IDENTIFICATION: 8.0

CRITERION ITEM(S)	ENABLING ITEM(S)
8.2 Data to be included in Figure I: • Btry C, 1st Bn, 40th Regiment	8.2.3 What happens when a shell or fuze category drops below the critical level?
• Shell Description Category - REA1, HEC1, SMA1 Level - 300, 300, 50 • Fuze Description Category - PDA, TIA, TIB Level - 150, 75, 300 Refer to Figures I and J and answer the following questions. 1. The correct entry for specifying the fire unit is: *a. FU: //C/1 /40; b. FU: /C/ /1 /40; c. FU:C/1/ /40/; d. FU: //I/C /40; 2. Which of the following is the correct entry to enter the shell data? a. SHELS:HEA1/300, HEC1/300, 50 /, *c. SHELS:HEA1/300,HEC1/300, SMA1/50, d. SHELS:HEA1/PDA,HEC1/TIA. SMA1/TIB,	category HEAl in Btry B, 2nd Bn, 18th Regiment, dropped below the critical level. *1. AFU;22Ø8; PLAN: ;FU: / /B/2 /18; CAT:HEAl;AMOL VIOLATED 2. AFU;22Ø8; PLAN: ;FU: / /2/B /18; CAT:HEAl;AMOL, VIOLATED

MODULE AFU UNIT __AMOL/ASR

TEST ITEMS

TASK IDENTIFICATION: 8.0

2 3. Which of the following is the correct entry to enter the information concerning fuzes?	8.3.1 What switch action do you take to have the computer process the completed AFU; AMOL message?
a. FUZES:PDA /75 ,TIA /15 ,	(C/ED CMPTR ACTION) 8.4.1 The purpose of the AFU; ASR message is to establish the total number of rounds a FU may fire:
c. FUZES:PDA /TIA,TIB /250, 75 /300, *d. FUZES:PDA /150,TIA /75 , TIB /300,	a. On a monthly basis.b. On a weekly basis.*c. On a daily basis.
.3 Taking computer action on the completed AFU; AMOL message causes the FU file to be updated and the AFU; AMOL message to be: *a. Printed on the ELP.	d. During combat operations. 8.5.1 To specify the daily maximum number of rounds a FU may fire, you enter a number following the (ARSLVL) mnemonic.
b. Transmitted to the FU. c. Transmitted to Div Arty. d. Displayed on the DPM.	8.5.2 If a value is not entered following the ASRLVL mnemonic, the maximum number of rounds a FU can fire daily is established (default value) as: *a. 9999 b. 4999 c. \$9999 d. \$\$\psi \psi \psi \psi \psi \psi \psi \psi

MODULF AFU
UNIT AMOL/ASR

TEST ITEMS

TASK IDENTIFICATION: 8.0

TASK ELEMENTS: 8.1 - 8.8

CRITERION ITEM(S)

- 8.4 Refer to Figure ____. Enemy action has temporarily disrupted your supply lines and the maximum number of rounds that a FU may fire on a daily basis must be reset. As a first step, you need to select the message format so the change can be entered into the TACFIRE Computer.
 - A. The switches on the switch action panel you would depress to select the message format you need are (C) and (3).
 - B. To display this input message you would activate the (FORMAT COMMAND) switch.
- 8.5 Assume that enemy action has temporarily disrupted your supply line and a decision has been made to reset the maximum number of daily rounds a FU is authorized to fire. You have already selected the AFU; ASR format message (Figure K) and must now make the entries. Answer the following questions concerning the entry of data into the AFU; ASR message format. (Sample data and questions)

Data to be included in Figure L.

- Weapon Type 105mm
- Supply Rate 900

ENABLING ITEM(S)

- 8.5.3 If a FU exceeds the maximum number of rounds it is authorized to fire daily, the Bn 'ACFIRE computer will:
 - a. Send a message to Div Arty.
 - Display a warning message on the Rh.
 - c. Request additional ammo from S-4.
 - *d. Output a warning message on the ELP.

MODULE AFU UNIT AMOL/ASR

TEST ITEMS

TASK IDENTIFICATION: 8.0

ENABLING ITEM(S)
·

TEST ITEMS

TASK IDENTIFICATION: 8.0

	CRITERION ITEM(S)	ENABLING ITEM(S)
8.6	Assume you have taken computer action on an AFU; ASR message. Pick the statements that indicate the results of this action.	
	a. The AFU;ASR message is displayed on the RD.	
	*b. FU files are updated.	
	c. Ammo inventory for each weapon is reduced.	
	*d. The AFU; ASR message is printed on the ELP.	
	<u>(b,d)</u>	
8.7	Put in the correct order the steps to print the AFU 2204 AMMO SUMMARY output message.	
	a. Enter PRINT and SUMS	
	 Select and display the AFU; COMD message. 	
	c. Take C/ED CMPTR ACTION	
8,8	(b,a,c) Refer to Figure, which shows an AFU 2204 AMMO SUMMARY output message.	
	 The maximum number of rounds per day for Btry A is (900). 	
	 The Weapon Type for Btry B is (105mm). 	
	3. The number of expended rounds for Btry C is $(35\emptyset)$.	4

MODULE	AFU		
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TRAINING ANALYSIS INFORMATION SHEET

- 1. TASK IDENTIFICATION: 9.0
- 2. TASK: Given a mission fired report, interpret contents, transmit to Div Arty and establish automatic transmission to a backup battalion.
- 3. CONDITIONS: Given situation to process a mission fired report, identify correct procedures. Given sample AFU;MFR message, interpret contents and identify changes. Given situation to establish automatic transmission of an AFU;MFR to a backup battalion, identify correct procedures. Given different formatted test questions concerning the processing, interpretation, and transmitting of an AFU;MFR message, provide correct response.
- 4. STANDARD: No errors.

5. TASK ANALYSIS:

	TASK ELEMENTS		EREQUISITE KNOWLEDGE SKILL REQUIREMENTS	' T	UPPLEMENTAL RAINING ATERIAL	REFERENCES
9.1 9.2 9.3	Identify when AFU;MFR message is generated. Display AFU;MFR. Interpret AFU;MFR	9.1	Know operation of ACC components. Know operation of ACC components.	1.	Picture/ drawing of ACC. AFU;MFR format	DTM 11-7440- 240-10 Chapter 4 Pages 4-159 through 4-1760
9.4	Make changes to AFU;MFR message. Take computer action and verify results. Establish automatic transmission of AFU;MFR to a back up Bn.	9.39.49.59.6	Able to decode mnemonics. Know operation of ACC components. Know operation of ACC components. Know operation of ACC components.	3.	AFU; COMD format. Additional material to be developed as required.	Chapter 6 Pages 6-1 through 6-6; 6-51 through 6-57; 6-75 through 103
the fire The sele addi AFU; prov tinu	: The AFU; MFR message at is presented within FM module as part of the mission processing, above task elements are cted to incorporate tional functions of the MFR message, as well as ide the student conity and optional reviewents within the instructal materials.			1		

MODULE	AFU
UNIT	MFR

CRITERION AND ENABLING OBJECTIVES

TASK IDENTIFICATION: 9.0

	CRITERION OBJECTIVE(S)		ENABLING OBJECTIVE(S)
9.1	The student can select from a list the message that is generated automatically by the computer following EOM as being: AFU; MFR message.	9.1.1	Pick from a list the purpose of an AFU; MFR message as being: TO UPDATE FILES STORED IN THE COMPUTER AND TO SEND AN MFR TO DIV ARTY.
9.2	The student can pick from a list the SPA switch action to take to display the AFU; MFR message as being: CYCLE MESSAGES AND/OR PRIORITY MESSAGE.	9.3.1	Match the following mnemonics with their definitions: a. SIZE - Target size,
9.3		Note:	 b. ATT - Attitude of target in mils. c. STR - Target strength. d. RV - Report value. e. FU1 - Fire unit name. f. SH1 - Shell description. g. FZ1 - Fuze description. Explanation of additional mnemonics will be included within the instructional material for student review.

MODULE	AFU
UNIT	MFR

CRITERION AND ENABLING OBJECTIVES

TASK IDENTIFICATION: 9.0

TASK ELEMENTS: 9.1 - 9.6

ENABLING OBJECTIVE(S) CRITERION OBJECTIVE(S) 9.4.1 The student can state the action Pick from a list the SPA switch that to take computer action on an is used to move a message or message AFU; MFR as being: segment from the RD to the CED so RD CMPTR ACTION. changes can be made as being: TRANSFER TO EDIT. B. The student can select from a 9.5.1 Pick from a list the two ammo list the results of taking computer action on an AFU;MFR conditions that the computer checks message as being: when an AFU; MFR message is processed to determine they are not exceeded The Bn Fire Unit File is as being: updated. Critical ammo level (AMOL). 2. An AFU; MFR message is transmitted to Div Arty. b. Available supply rate (ASR). 9.6.1 Given a picture/drawing of the ACC 19.6 When presented with a list of procedures to automatically transmit switch panel assembly, identify the AFU; MFR messages to a backup switch actions to take to select the battalion, but with the steps in a AFU; COMD message format. The switch scrambled order, the student can matrix is referenced by letters for state the correct order in which these rows and numbers for columns. The procedures are performed. The student is able to match the correct correct order is: letter/number combination to select the required message format. The a. Select and display AFU; COMD correct steps are: message. Pepress switches G and 3. b. Specify XTEL and TO. Activate FORMAT COMMAND switch. c. Press C/ED CMPTR ACTION. 9.6.2 State CED as being where the AFU; COMD message format will display after being selected from the format/command matrix.

MODULE AFU
UNIT MFR

TEST ITEMS

TASK IDENTIFICATION: 9.0

CRITERION ITEM(S)	ENABLING ITEM(S)
9.1 Which of the following m generated automatically computer following EOM (mission)?	by the poses of the AFU;MFR message?
•	
a. AFU;COMD	*b. To send an MFR to Div Arty.
*b. AFU;MFR	c. To cause the TACFIRE system to be operational.
c. AFU;MASK	d. To establish a critical ammo leve
d. AFU; ASR	(<u>a, b</u>)
9.2 Which of the following s should be pressed to dis AFU; MFR message generate computer?	play an 9.3.1 A. From the following list, match
a. C/ED CMPTR ACTION	1. Shell description.
b. TRANSFER TO EDIT	2. Attivude of target in mils.
c. FORMAT COMMAND	3. Target strength.
*d. CYCLE MESSAGES	4. Fire unit name.
9.3 Refer to Figure wh	
an AFU;MFR message as di on the RD.	splayed STR $(\underline{3})$
A. Will this message be	
matically transmitte backup battalion? (
B. The report value inc	icated is B. "RV" means?
given in:	1. Reliability.
1. Percent.	*2. Report Value.
2. Feet.	3. Range Verification.
3. Mils.	4. Range Variation.
*4. Meters.	

MODULE AFU
UNIT MFR

TEST ITEMS

TASK IDENTIFICATION: 9.0

	CRITERION ITEM(S)	ENABLING ITEM(S)
9.4	 C. The target is described as: *1. A rectangle. 2. A radius. 3. A square. Put in the correct order the steps to take so that changes can be made to an AFU; MFR message displayed on the RD. a. Press C/ED CMPTR ACTION. b. Press TRANSFER TO EDIT. c. Enter changes to the AFU; MFR message. (b, c, a) 	9.3.1 C. Refer to Figure In which mnemonic field of the AFU;MFR message format should a fuze description be entered? 1. FU1. 2. SH1. *3. FZ1. 4. XT. 9.4.1 Which of the following SPA switches must be pressed to move a message or message segment from the RD to the CED so changes can be made to the message content? a. RD CMPTR ACTION.
9.5.	 A. Which of the following switches should be pressed to process an AFU; MFR already displayed on the RD? 1. RD XMIT. 2. FORMAT COMMAND. *3. RD CMPTR ACTION. 4. SAVE. 	b. REPLACE. c. SAVE. *d. TRANSFER TO EDIT. 9.5.1 Which of the following messages when processed cause the TACFIRE computer to check the critical ammo level and available supply rate to see that they are not exceeded? a. AFU;2208. b. AFU;BAMOUP. c. AFU;COMD. *d. AFU;MFR.

MODULE AFU
UNIT MFR

TEST ITEMS

TASK IDENTIFICATION: 9.0

	CRITERION ITEM(S)	ENABLING ITEM(S)
9.5	 B. Which two of the following are results of taking computer action on an AFU; MFR message? 1. The target is plotted on the DPM. *2. The Bn FU file is updated. *3. An AFU; MFR message is transmitted to Div Arty. 4. An FM; EOM message is printed on the ELP. (2, 3) Put in the correct order the initial 	9.6.1 Refer to Figure The FDO wishes to have AFU; MFR messages automatically transmitted to a backup battalion. To do this you must select the correct message format and make the necessary entries. From the list below, select the two actions required to select and display the correct message format to cause AFU; MFR messages to be transmitted to a backup Bn automatically. *a. Activate FORMAT SELECT. b. Depress switches A and 3. *c. Depress switches G and 3. d. Depress switches E and 3.
	steps to take to cause AFU;MFR messages to be transmitted automatically to a backup Bn. a. Press C/ED CMPTR ACTION. b. Select and display AFU;COMD message. c. Specify XTEL and TO. (b, c, a)	e. Activate FORMAT COMMAND. (c, a) 9.6.2 After being selected, the AFU; COMD message format will be displayed on the (RD/CED)?

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MODULE	_AFU
UNIT	RUTLD

TRAINING ANALYSIS INFORMATION SHEET

- 1. TASK IDENTIFICATION: 10.0
- 2. TASK: Build a new fire plan from existing data in the fire unit file and verify data entries.
- 3. CONDITIONS: Given requirement to build a new fire plan from existing data in the fire unit file by using an existing fire unit or by weapon type and/or ammunition type, select correct message format and fill in appropriate entries. Given sample AFU 2203 FU REPORT output message, interpret message contents. Given different formatted test items concerning the building of a new plan from existing data in the fire unit file, provide correct response.
- 4. STANDARD: No errors.

5. TASK ANALYSIS:

,	TASK ELEMENTS	PREI OR S	REQUISITE KNOWLEDGE SKILL REQUIREMENTS	TI	UPPLEMENTAL RAINING ATERIAL	REFERENCES
10.1	Select and display AFU; BUILD message.	10.1	Know operation of ACC component parts.	1.	Picture/ drawing of ACC.	DTM 11-7440- 240-10
10.2	Identify entries to create a new fire plan.	10.2	None.	2.	Picture of	Chapter 4 Pages 4-159 through 4-176D.
10.3	Identify results of computer action.	10.4	Able to decode mnemonics.	3.	Entry data	Chapter 6 Pages 6-1 through 6-6;
10.4	Interpret AFU 2203 FU REPORT output message.			5.	Picture of AFU 2203 FU REPORT output message. Additional material to be developed as required.	6-67 through 6-103.

MODULE	AFU	
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CRITERION AND ENABLING OBJECTIVES

TASK IDENTIFICATION: 10.0

	C	RITERION OBJECTIVE(S)		ENABLING OBJECTIVE(S)
10.1	swi swi sel mes	en a picture/drawing of the ACC tch panel assembly, identify the tch actions that can be used to ect and display the AFU; BUILD sage. The switch matrix is erenced by letters for rows and	10.1.1	Pick from a list the purpose of the AFU; BUILD message as being: TO CONSTRUCT A PLAN FROM THE FIRF UNIT OR FIRE UNIT PLANNING FILES. State ON THE CED as being where the
	num abl	bers for columns. The student is e to match the correct letter/ ber combination to select the		AFU; BUILD message format will display after being selected.
		uired message format. The correct ps are:	10.2.2	Match the following mnemonics with their definition:
	a.	Depress switches F and 3.		a. NEWPLN - Plan name
	b.	Activate FORMAT COMMAND switch.		b. PLAN - Plan name (existing name)
10.2	Α.	Given information to construct a new fire plan from the current		c. FU - Fire Unit
		fire unit file, the student will identify the data to simulate		d. WPN - Weapon type
		the completion of an AFU; BUILD input message. Data entries will		e. AMMO - Ammunition type
		include: • Plan Name (new plan)	10.3.1	Select from a list the switch action to take to process the completed AFU; BUILD message as
<u> </u>		• Fire Unit		being: C/ED CMPTR ACTION.
 		(Data to be specified)	10.3.2	State ASRLVL, EXPEND, AND AMOL as being the data that is also
İ	в.	Given irformation to construct a		transferred to a new plan from the current fire unit file when a new
		new fire plan with fire units selected by weapon type and/or ammunition, the student will		planning file is constructed using the AFU; BUILD message.
		identify the data to simulate the completion of an AFU; BUILD input message. Data entries will		
		include:		
		• Plan Name (new plan)		
		Weapon Type		
L		e Communication Type		

MODULE	AFU
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CRITERION AND ENABLING OBJECTIVES

TASK IDENTIFICATION: 10.0

CRITERION OBJECTIVE(S)	ENABLING OBJECTIVE(S)
the results of taking computer action on an AFU; BUILD message as being: a. A new fire plan is constructed from the current FU file. b. An AFU 2203 FU REPORT is printed on the ELP. 10.4 Given an AFU 2203 FU REPORT output	10.4.1 Match the following mnemonics with their definition: a. CATEGORY - Shell or fuze b. ON HAND - Amount on hand (shells and fuzes) c. AMOL - Critical ammunition level Note: Explanation of additional mnemonics will be included within the instructional material for student review.

MODULE AFU UNIT BUILD

TEST ITEMS

TASK IDENTIFICATION: 10.0

CRITERION ITEM(S)	ENABLING ITEM(S)
wishes to construct a new fire plan by transferring fire unit data from the fire unit file to the fire unit planning file. As the first step you need to select the message format so you can make the necessary entries. From the list of steps given below, first select the procedural steps required and then place them in the correct order: *a. Depress switches F and 3. b. Activate PRIORITY MESSAGE switch. c. Activate C/ED CMPTR ACTION switch. *d. Activate FORMAT COMMAND switch. e. Depress switches H and 3. (a, d)	10.1.1 Which of the following is the purpose of the AFU; BUILD input message? a. To print AFU messages on the ELP. b. To edit a fire unit planning file. *c. To construct a plan from fire unit or fire unit planning files. d. To check for missing elements in fire unit files. 10.2.1 After being selected by the appropriate switch actions, the AFU; BUILD message format will appear on the (RD/CED)? 10.2.2 1. From the following list, match each mnemonic with its definition and function. a. Fire unit. b. Ammunition type. c. Plan name. d. Weapon type. APMO (b) WPN (d) FU (a) NEWPLN (c)

MODULE AFU UNIT BUILD

TEST ITEMS

TASK IDENTIFICATION: 10.0

CRITERION ITEM(S)	ENABLING ITEM(S)
CRITERION ITEM(S) 0.2 A. You wish to transfer fire unit data for B Btry (1/40) to a fire unit plan called 'VICTOR'. Refer to Figure which shows an empty AFU;BUILD message format. Which of the following is the correct entry for the plan name? 1. NEWPLN: ;PLAN:VICTOR; 2. NEWPLN:VICTOR;PLAN:VICTOR; *3. NEWPLN:VICTOR;PLAN:B/1/40; B. You wish to transfer all FUs in your Bn which have 'CH' ammo on hand to a new fire unit plan called 'FLAME'. Refer to Figure which shows an empty AFU;BUILD message format. Which of the following is the correct entry to transfer these units of your Bn (1/40). *1. FU: / / / / WPN: ;AMMO:CH; 3. FU: / / 1/40; WPN: ;AMMO:CH; 4. FU: / / 1/40; WPN: ;AMMO:CH;	10.2.2 2. Which of the following mnemonics is used to construct a new fire plan from the current fire unit file? *a. NEWPLN. b. PLAN. c. FU. d. WPN. e. AMMO. 3. Which of the following mnemonics is used to transfer data from a fire unit planning file to the current file? a. NEWPLN. *b. PLAN. c. FU.

MODULE AFU UNIT BUILD

TEST ITEMS

TASK IDENTIFICATION: 10.0

CRITERION ITEM(S)	ENABLING ITEM(S)
10.3 Which of the following are results of taking computer action on an AFU;BUILD message? *a. A new plan is entered into the the fire unit file. b. An AFU;BUILD message is printed on the ELP. *c. An AFU;2203 FU REPORT output message is printed on the ELP. d. The PRIORITY MESSAGE switch lights. (a, c) 10.4 Refer to Figure which shows an AFU;2203 FU REPORT output message. a. What is the plan name? (VICTOR) b. Does the report include muzzle velocity information? () c. How many rounds of GSA2 projectiles are on hand? ()	10.3.1 Which of the following switches should be pressed to process an AFU; BUILD message? a. RD CMPTR ACTION. b. TRANSFER TO EDIT. *c. C/ED CMPTR ACTION. d. FORMAT COMMAND. 10.3.2 When a new planning file is constructed using an AFU; BUILD message, ASRLVL, EXPEND, and AMOL data are also transferred to the new plan? (TRUE/FALSE) 10.4.1 From the following list, match each mnemonic with its definition and function: a. Shell or fuze. b. Critical ammunition level. c. Amount of shells and fuzes on hand. AMOL (b) CATEGORY (a)

MODULE	AFU
INTT	COME

TRAINING ANALYSIS INFORMATION SHEET

- 1. TASK IDENTIFICATION: 11.0
- 2. TASK: Use the AFU user command message to: check fire unit data and interpret fire unit check report; verify data entered into the AFU tiles; transmit specified fire unit data to a subscriber; print and show selected fire unit data and interpret output reports.
- 3. CONDITIONS: Given requirement to check fire unit data, select correct mcssage format and fill-in appropriate entries, and interpret AFU 2205 FU CHECK REPORT output message, Given requirement to edit, transmit, print, or show selected fire unit data, select correct message format and fill-in appropriate entries and interpret output reports. Given different formatted test items concerning the purpose and use of the user's command message, provide correct response.
- 4. STANDARD: No errors.

5. TASK ANALYSIS:

	TASK ELEMENTS		REQUISITE KNOWLEDGE SKILL REQUIREMENTS	T	UPPLEMENTAL RAINING ATERIAL	REFERENCES
11.1 11.2 11.3 11.4 11.5	COMD message. Check for missing FU information. Interpret AFU;2205 FU CHECK REPORT output message. Edit fire unit file. Transmit situation report to Div Arty. Print, show, or transmit AFU data.	11.1 11.2 11.3 11.4	component parts. Able to decode mnemonics. Know AFU; UPDATE mnemonics, how to select and display AFU; COMD messages. Know how to select and display AFU; COMD message.	1. C 2.	Ficture/ drawing of ACC. Picture of AFU;COMD message. Entry data and AFU;UPDATI format. Picture of AFU;2203 AFU;2204 AFU;2205 AFU;2206 AFU;SR Additional material to be developed as required.	DTM 11-7440- 240-10 Chapter 4 Pages 4-159 through 4-1760 Chapter 6 Pages 6-1 through 6-6; 6-75 through 6-103

MODULE AFU
UNIT COMD

CRITERION AND ENABLING OBJECTIVES

TASK IDENTIFICATION: 11.0

	CRITERION OBJECTIVE(S)		ENABLING OBJECTIVE(S)
11.1	The student is able to select from a list the purposes of the AFU; COMD message as being: a. To enable a check for missing AFU file data.	11.2.1	State CHECK as being the mnemonic field in the AFU; COMD message that must be specified to cause the computer to examine a fire unit or fire unit file for missing information.
11.2	 b. To display AFU data. c. To transmit AFU data. d. To print AFU data. e. Edit selected AFU data. When presented with a list of procedures to check a fire unit or a file for missing information, but with the steps in a scrambled order, the student can state the correct order in which these procedures are performed. The correct order is: a. Select and display AFU; COMD message. b. Specify CHECK and other appro- 	11.3.1	Match the following mnemonics with their definitions. a. WPN - Weapon type. b. WSTR - Weapon strength. c. AZ - Azimuth of fire. d. CORD - Fire unit coordinates. e. APPL - Authorized munition. f. MSN - Mission of the fire unit. g. ZONE - Name of zone of responsibility. h. GZ - Grid zone.
11.3	priate mnemonics. c. Take C/ED CMPTR ACTION.	1.1.4.1	i. DF - Referred deflection. Select from a list the messages that will be placed in the receive queue when EDIT is specified in an AFU; COMD message as being: a. AFU; UPDATE b. AFU; BAMOUP c. AFU; REG d. AFU; MASK e. AFU; MV

MODULE AFU
UNIT COMD

CRITERION AND ENABLING OBJECTIVES

TASK IDENTIFICATION: 11.0

	CF	RITERION OBJECTIVE(S)		ENABLING OBJECTIVE(S)
11.4	ced the ste stu- in	ures to verify data entered into fire unit file, but with the ps in a scrambled order, the dent can state the correct order which these procedures are permed. The correct order is:	11.5.1	Pick from a list the results of taking computer action to initiate transmission of SITREPs to Div Arty as being: a. AFU;SR message 13 placed in the receive queue. b. AFU;2206 SITUATION REPORT is
!		message.		printed on the ELP.
· 	b. с.		11.5.2	State the purpose of the AFU; SR message as being: TO TRANSMIT SITUATION DATA THAT IS NOT STORED INFORMATION.
	d.	Use PRIORITY MESSAGE switch and CYCLE MESSAGES switch to display the AFU; UPDATE message on the RD.		Match the following mnemonics with their definition.
	e.	Verify or edit entries.		a. NOMFR - Number of fire missions
	ſ.	Take DELETE action to remove AFU; UPDATE from RD.		b. TIME - Time period covered.c. TOTAL - Ammunition totals.
11.5	Α.	When presented with a list of procedures to initiate transmission of situation reports (SITREPs) to Div Arty, but with the steps in a scrambled order, the student can state the correct order in which these procedures are performed. The correct order is:		Explanation of additional mnemonics will be included within the instructional material for student review. State that the type of data sent by using the AFU; COMD message and specifying XMIT will: VARY WITH THE ADDRESSEE.
		 Select and display AFU; COMD message. Specify SITREP and PRINT. Take C/ED CMPTR ACTION. 	L1./.1	Pick from a list the error message received when XTEL is specified a second time in another AFU; COMD message as being: XTEL ALREADY ON.

MODULE AFU
UNIT COMD

CRITERION AND ENABLING OBJECTIVES

TASK IDENTIFICATION: 11.0

CF	RITERION OBJECTIVE(S)	ENABLING OBJECTIVE(S)
11.5 C.	When presented with a list of procedures to complete and transmit situation information (SITREPs) to Div Arty which is not stored in the Bn TACFIRE computer, but with the steps in a scrambled order, the student can state the correct order in which these procedures are performed. The correct order is; 1. Display AFU;SR message. 2. Press TRANSFER TO EDIT. 3. Make appropriate entries. 4. Take C/ED CMPTR ACTION. When presented with a list of procedures to transmit a situation report (SITREP) of stored information to Div Arty, but with the steps in a scrambled order, the student can state the correct order in which the procedures are performed. The correct order is: 1. Select and display AFU;COMD message.	ENABLING OBJECTIVE(S)
	 Specify SITREP and XMIT. Take C/ED CMPTR ACTION. 	

MODULE AFU
UNIT COMD

CRITERION AND EN'BLING OBJECTIVES

TASK IDENTIFICATION: 11.0

CRITERION OBJECTIVE(S)	ENABLING OBJECTIVE(S)
11.6 When presented with a list of procedures to use the AFU; COMD message to print, show, or transmit AFU data, but with the steps in a scrambled order, the student can state the correct order in which the procedures are performed.	
A. Print an AFU 2203 FU REPORT output message for AFU data on the Bn's 155mm weapons. The correct order for the step is:	
1. Select and display AFU;COMD message.	
2. Specify PRINT and WPN.	
3. Take C/ED CMPTR ACTION.	
B. Transmit fire unit data to an FSO. The correct order for the steps is:	
 Select and display AFU; COMD message. 	
2. Specify XMIT and TO.	
3. Take C/ED CMPTR ACTION.	
C. Given a Transmit Fire Unit and Ammunition Data to Battalion output message as presented on the ELP, the student is able to interpret the contents of the message.	
(To be developed)	

MODULE AFU
UNIT COMD

CRITLRION AND ENABLING OBJECTIVES

TASK IDENTIFICATION: 11.0

	С	RITERION OBJECTIVE(S)	ENABLING OBJECTIVE(S)
11.7 When presented with a list of procedures to initiate or terminate transmission of AFU messages to a backup battalion, but with the steps in a scrambled order, the student can state the correct order in which these procedures are performed. The correct order is:		dures to initiate or terminate insmission of AFU messages to a skup battalion, but with the steps a scrambled order, the student is state the correct order in which ese procedures are performed. The	
	a.	Select and display AFU; COMD message.	
	ь.	Specify XTEL and TO.	
	c.	Take C/ED CMPTR ACTION.	
		<u> </u>	

MODULE AFU
UNIT COMD

TEST ITEMS

TASK IDENTIFICATION: 11.0

		CRITERION ITEM(S) ·		ì	ENABLING ITEM(S)
11.1		ch of the following are purposes the AFU;COMD message?	11.2.1		AFU;COMD message specifying CHECk used to:
	*a.	To enable a check for missing AFU data.		a.	
	ъ.	To update muzzle velocities.		ь.	Check for computer component failure.
	*c.	To print, show, or transmit AFU data.		с.	Check off fire units for entry into a fire plan.
	d.	To add registration data to the fire unit file.		*d.	Check AFU files for missing information.
11.2		_c) er to Figure . You have been		Α.	From the following list match each mnemonic with its definition and function.
	ask pla	ed to check the fire unit nning file (PLAN2) for fire t A/1/40, to see if there is any			1. Referred deflection.
	mis ste	sing data. Place the following ps in the correct order to check			2. Azimuth of fire.
	thi	s unit's plan file.			3. Mission of the fire unit.
	a.	Take C/ED CMPTR ACTION.			4. Weapon type.
	ь.	Specify CHECK and enter PLAN2 and $A/1/40$.			5. Grid zone.
	c.	Select and display the AFU; COMD			AZ $(\underline{2})$
	,	message format.			DF (<u>1</u>)
	(<u>c</u> ,	b, a)			WPN (<u>4</u>)
					MSN (<u>3</u>)
		•			

MODULE AFU
UNIT COMD

TEST ITEMS

TASK IDENTIFICATION: 11.0

CR	ITERION ITEM(S)	ENABLING ITEM(S)
an AFU a. Do Pl we b. Do Pl	to Figure which shows 1;2205 FU CHECK REPORT. The sees "A Btry" 1/40 entries for an 2 include the unit's sapon strength? (Yes) The sees "A Btry" 1/40 entries for an 2 include the unit's ssion? (No)	11.3.1 B. In which of the following mnemonic fields should you enter authorized munitions: 1. AZ. *2. APPL. 3. WPN
on Bn lo fi th co fr un gi pr th or *1. 2. *3.	Activate REPLACE switch. Activate FORMAT COMMAND switch. Press PRIORITY MESSAGE switch.	4. DF. C. The mnemonic WSTR means? 1. Weapon type. 2. Target strength. 3. Ammo on hand. *4. Weapon strength. 11.4.1 Which five of the following messages are placed in the receive queue when an AFU; COMD message is entered with EDIT specified, assuming all possible data is available? a. AFU; BUILD. *b. AFU; BUILD. *c. AFU; MASK. *d. AFU; REG. *e. AFU; BAMOUP. f. AFU; ASR. *g. AFU; MV. h. AFU; AMOL.
		i. AFU;MFR. (b, c, d, e, g)

MODULE AFU
UNIT COMD

TEST ITEMS

TASK IDENTIFICATION: 11.0

TASK ELEMENTS: 11.1 - 11.7

CRITERION ITEM(S)

- 11.4 B. Put in the correct order the procedures to request a FU file for editing using the AFU; COMD message.
 - 1. Specify EDIT.
 - 2. Take C/ED CMPTR ACTION.
 - 3. Enter name of FU and PLAN.

(3, 1, 2) or (1, 3, 2)

- C. Pick the statements that indicate the results of taking computer action on an AFU; COMD message specifying an FU, PLAN, and EDIT request.
 - 1. CYCLE MESSAGES switch lights.
 - *2. AFU messages are available for display on the RD.
 - 3. The XMTG light goes on.
 - 4. Message status line is updated.

(2, 4)

ENABLING ITEM(S)

- 11.5.1 Which of the following statements indicate the results of taking computer action to initiate transmission of situation information (SITREPs) to Div Arty when using the AFU; COMD message.
 - a. An AFU; SR message is displayed on the CED.
 - *b. An AFU; SR message is placed in the receive queue.
 - c. An AFU; SR Situation Report output message is displayed on the RD.
 - d. An AFU;2206 SITUATION REPORT output message is placed in the receive queue.
 - *e. An AFU;2206 SITUATION REPORT output message is printed on the ELF.

 $(\underline{b}, \underline{e})$

- 11.5.2 The purpose of the AFU; SR SITUATION REPORT output message is:
 - a. To alert subscribers to prepare to receive a situation report.
 - b. To request transmission of a situation report.
 - To transmit sorted situation data.
 - *d. To transmit situation data that is not stored in the computer.

MODULE AFU
UNIT COMD

TEST ITEMS

TASK IDENTIFICATION: 11.0

	CRITERION ITEM(S)	ENABLING ITEM(S)
11.4 D	action to cause the above AFU messages to be placed in the receive queue, the first action to take is to press the: *a. PRIORITY MESSAGE switch b. CYCLE MESSAGES switch. c. RD XMIT switch. d. PAGE switch. 2. If the AFU; UPDATE message does not display after pressing the PRIORITY MESSAGE switch, you must use the (CYCLE MESSAGES/ PAGE) switch to step throug	3. Time correction. 4. Time of the message. B. The mnemonic NOMFR in the AFU;2206 SITUATION REPORT output message means? 1. Number of fire reports. *2. Number of fire missions. 3. Number of fire unit
E	the RD message queue. Having displayed an AFU;UPDATE message using the AFU;COMD message by specifying EDIT, you wish to add an entry into this message. Put the followin procedures in the correct order. 1. Take C/ED CMPTR ACTION. 2. Press TRANSFER TO EDIT. 3. Make entries in AFU;UPDATE message. (2, 3, 1)	registrations. 11.6.1 When an AFU; COMD input message with XMIT specified is entered into the computer, which of the following is true? a. Data to all addresses is always the same. *b. Data transmitted will vary with addressee.

MODULE AFU
UNIT COMMAND

TEST ITEMS

TASK IDENTIFICATION: 11.0

	CRITERION ITEM(S)	ENABLING ITEM(S)
11.4 F.	Which of the following SPA switches must be pressed to remove the above AFU; UPDATE message from the receive queue? 1. REPLACE. 2. PAGE. *3. DELETE. 4. CYCLE MESSAGES.	11.7.1 Which of the following error messages will be received when XTEL is specified ON a second time in a subsequent AFU; COMD message? a. ILLEGAL AFU MESSAGE. b. TO INVALID. *c. XTEL ALREADY ON. d. XTEL CANNOT BE SPECIFIED TWICE.
11.5 A.	Refer to Figure Place the following steps to print a Situation Report and place an AFU; SR message in the receive queue in the correct order. 1. Select and display AFU; COMD message. 2. Take C/ED CMPTR ACTION. 3. Specify SITREP and PRINT. (1, 3, 2)	
С.	With an AFU; SR message displayed on the RD, place the following actions for completing and transmitting situation information which is not stored in the computer in the correct order. 1. Press TRANSFER TO EDIT. 2. Make appropriate entries in AFU; SR message. 3. Take C/ED CMPTR ACTION. (1, 2, 3)	

MODULE AFU
UNIT COMD

TEST ITEMS

TASK IDENTIFICATION: 11.0

		CRITERION ITEM(S)	ENABLING ITEM(
11.5	В.	Place the following steps to transmit stored situation information in the correct order.	
		1. Take C/ED CMPTR ACTION.	
		2. Specify SITREP and XMIT.	
		3. Select and display AFU; COMD message.	
		(3, 2, 1)	
11.6	Α.	Refer to Figure You wish to provide your FDO with a hardcopy of AFU data on Bn 155mm weapons. Place the following steps to print an AFU 2203 FU REPORT output message in the correct order.	
		1. Select and display the AFU;COMD message format.	
		2. Take C/ED CMPTR ACTION.	
		3. Specify PRINT and WPN.	
		(1, 3, 2)	
	В.	You wish to transmit fire unit data to an FSO. Place the following steps for transmitting an AFU; UPDATE message in the correct order.	
		1. Take C/ED CMPTR ACTION.	
		2. Specify X4IT and TO.	
		3. Select and display the AFU; COMD message format.	
		(3, 2, 1)	

MODULE AFU
UNIT COMD

TEST ITEMS

TASK IDENTIFICATION: 11.0

	CRITERION ITEM(S)	enabling item(s)
11.6	C. Refer to Figure which shows a Transmit Fire Unic and Ammunition Data to Battalions Output Message.	
	1. How many rounds of HEC2 are on hand for A/1/40? ()	
	2. What is the powder temperature for A/1/40? ()	
	(Data entries to be developed)	
11.7	Refer to Figure . The FDO wishes to have AFU messages automatically transmitted to a backup battalion. Place the following steps to initiate automatic transmission of AFU messages to the backup battalion in the correct order.	
	a. Take C/ED CMPTR ACTION.	
	b. Specify XTEL and TO.	
	c. Select and display AFU;COMD message.	
	(<u>c, b, a</u>)	

APPENDIX A

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 - A. Volume 1, Chapter 1 Introduction Chapter 2 - Installation
 - B. Volume 2, Chapter 3 Equipment Operation
 - C. Volume 3, Chapter 4 Special Operating Instructions
 - D. Volume 4, Chapter 5 Support Functions
 Chapter 6 Ammunition and Fire Unit Function
 Chapter 7 Meteorological Function
 Chapter 8 Fire Support Officer Function
 - E. Volume 5, Chapter 9 Tactical and Technical Fire Control Function
 - F. Volume 6, Chapter 10- Non-Nuclear Fire Plan Function
 - G. Volume 7, Chapter 11- Artillery Target Intelligence Function Chapter 12- Survey Function
 - H. Volume 8, Chapter 13- Operation Under Unusual Conditions Chapter 14- Maintenance
 - I. Volume 9, Appendix D Fault Catalog
- 2. Headquarters, Department of the Army, FIELD ARTILLERY CANNON GUNNERY, FM 6-40, 28 June 1974.
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- 4. USAFAS, Office of the Deputy Assistant Commandant for Combat Developments, Fort Sill, Oklahoma. TACFIRE: THE TACTICAL FIRE DIRECTION SYSTEM. Reference Note FC-AA, April 1975.

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- 5. U.S. Army Field Artillery School, Ft. Sill, Oklahoma, System Engineering of Training Documentation. May 1975.
 - A. Task List, Division Artillery Operations Center
 - B. Task List, Battalion Operations Center, Direct Support Field Artillery Battalion.
 - C. Fire Direction Course, Task Selection List, Direct Support Battalion.
 - D. Fire Direction Course, Task Selection List, General Support Battalion.
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